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ABSTRACT

Objectives for the second national assessment of career and occupational development (COD) are listed under two major categories: (1) Knowledge, abilities, and attitudes relevant to career decisions and (2) knowledge, abilities and attitudes necessary for success in a career or occupation. Each category is broken down into several subheadings followed by the objectives for each of four age categories--ages 9, 13, 17, and 26-35. An outline of the objectives serves as an index, and a brief introductory chapter describes the procedures followed in developing these objectives (which are a revision of those used for the first national assessment of COD in 1973-74). Preface material includes notes on the major goals of the National Assessment of Educational Progress (NAEP), which gathers information about the knowledge, skills, understanding, and attitudes of young people ages 9, 13, 17, and 26-35 in 10 learning areas, one of which is career and occupational development (COD). A list of the advisory panel and of the subject-matter and lay people who reviewed the COD objectives is appended. (JT)

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National Assessment of Educational Progress

Objectives

for

Career and Occupational Development

Second Assessment

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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National Assessment of Educational Progress, 1977

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PREFACE

The major goals of the National Assessment of Educational Progress (NAEP) are to make available to the general public and to the educational community comprehensive data on the academic attainments of young Americans and to measure changes that take place in these attainments over a period of time. These data are intended to be useful to the general public and to educators in making decisions about curricula and the allocation of education resources.

Specifically, National Assessment gathers information about the knowledge, skills, understanding and attitudes of young people, ages 9, 13, 17 and 26-35, in 10 learning areas. Exercises in the learning areas are administered to approximately 100,000 young people each year.

The first step in National Assessment's work in any learning area is to determine which educational objectives are important for young people to achieve. These objectives are identified and defined through the efforts of educators and lay people brought together for that purpose. The final objectives must meet three criteria:

1. They must be considered important by scholars in the learning area.

2. They must be considered acceptable education tasks by the schools.

3. They must be considered by lay people as desirable objectives for young people to attain.

Once the objectives are identified and defined, questions and tasks – called exercises – are developed to measure how well or to what degree the objectives are being achieved. The exercises are then administered throughout the country to young people selected as subjects by stratified and random sampling. Exercise packages are scored, the results analyzed and findings disseminated through official reports that are distributed through the Superintendent of Documents and National Assessment.

As soon as an assessment is completed, work is begun on the development of objectives and exercises for the next assessment. Since areas of emphasis in any area change over time, this work involves a revision of the existing objectives and development of new exercises as well as readministration of certain exercises for measurement of change. The objectives presented in this booklet are those prepared for the second assessment of career and occupational development.

CHAPTER I

DEVELOPMENT OF CYCLE II CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

Following the completion of the first national assessment of career and occupational development (COD) during 1973-74, an advisory panel of consultants was formed to prepare an updated draft of the COD objectives for review by subject-matter and lay people. By the spring of 1975, this advisory panel had prepared a document that outlined in detail revised objectives based on current literature in the field.

During 1976, the draft of objectives prepared by the advisory panel was reviewed by a group of subject-matter and lay people. This group included representatives from education, business and various professional and community organizations across the country. Because of the complexity and length of the objectives, it was felt that these reviewers would need considerable time to study them. Therefore, the review was conducted through the mail rather than at a series of conferences. The reviewers were asked to provide detailed suggestions for changes to the advisory panel's draft of the objectives. The National Assessment staff and the advisory panel then examined each of the reviewer's suggestions and made appropriate changes in the objectives. The staff and advisory panel's reaction to each of the reviewer's comments was then returned to all the reviewers. The reviewers were given time in which to comment on the reactions to their suggestions and the new changes in the objectives. On the basis of the comments of the reviewers to the new draft, the National Assessment advisory panel again made appropriate changes to the objectives. This final draft of objectives was sent to the reviewers for approval in January of 1977. (For a list of the advisory-panel members and subject-matter and lay reviewers, see Appendix A.)

The COD objectives presented in this booklet maintain a high degree of continuity with the objectives assessed in 1973-74. This continuity is desirable since it permits National Assessment to measure changes that occur between the first and second assessment.

Most of the changes between the old and new objectives are reflected in increased emphasis in the following areas:

- The effect of interests and values on career decisions.

- The evaluation of sources of information regarding individual characteristics.
- The recognition of benefits and individual rights related to employment.
- The relationship between careers and lifestyles.
- The effect of social and technological changes on entry requirements and job responsibilities.
- The process and implementation of career decision making.
- The improvement, modification and change of career plans.
- The importance of responsibility and initiative in career development.
- The importance of interpersonal skills in career development.
- The importance of personal fulfillment in careers.

Copies of the objectives and assessment results from the first assessment conducted in 1973-74 and requests for the second assessment objectives and future assessment results can be obtained by writing to:

National Assessment of Educational Progress
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Organization of the Objectives Booklet

The following chapter contains a summary of the COD objectives. This summary is designed to provide the reader with an outline of the major COD objectives. Opposite each of the main headings in the summary are page numbers indicating where the reader can find a more detailed description of that particular heading by age level in the full set of objectives. The full set of objectives including age-specific objectives are contained in the pages following the summary.

CHAPTER 2

OUTLINE OF CYCLE II CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

I. KNOWLEDGE, ABILITIES AND ATTITUDES RELEVANT TO CAREER DECISIONS

A. Awareness and knowledge of individual characteristics

1. Abilities
   a. Know one's own abilities
   b. Understand one's own abilities relative to those of others
   c. Recognize the multiple causes and effects of abilities
2. Interests
   a. Know one's own interests
   b. Understand one's own interests relative to those of other individuals
   c. Recognize the multiple causes and effects of interests
3. Values
   a. Know one's own values relative to those of other individuals
   b. Understand one's own values relative to those of other individuals.
   c. Recognize the multiple causes and effects of values

B. Knowledge of career and occupational characteristics

1. Major duties
   a. Know the major duties of specific occupations
2. Entry requirements
   a. Know the entry requirements of different occupations
3. Work conditions
   a. Know differences in work conditions among different occupations
   b. Understand that differences in work conditions influence the lifestyle of workers and their families
   c. Recognize that work conditions may conflict with individual interests and values
4. Benefits and employment practices
   a. Know employment benefits – including social security, medical, vacation and retirement benefits – related to occupations
   b. Know legal requirements protecting persons seeking employment
   c. Recognize factors that encourage or discourage formation of

labor and management organizations
   d. Compare and evaluate specific occupations in terms of employee benefits
5. Social and technological chan
   a. Recognize that social and technological changes can modify entry requirements and job responsibilities, necessitating adjustments in career planning and preparation
   b. Understand that technological, economic, political and social changes result in decreases in the availability of some kinds of occupations and increases in others
   c. Accept the effects of social and technological changes on the availability and desirability of specific careers and occupations
6. Occupational classifications
   a. Know that many occupations possessing similar characteristics can be grouped into occupational families or clusters
   b. Recognize occupational classifications such as public/private, profit/nonprofit, and union/nonunion
   c. Understand the differences in duties, responsibilites and entry requirements between different occupations within an occupational cluster or family

C. Making and implementing career and occuaptional decisions

1. Individual characteristics and occupational requirements
   a. Recognize that abilities, interests and values affect career choice
   b. Identify occupational characteristics that are congruent with one's own abilities, interests and values
   c. Recognize that many limitations can be overcome and do not necessarily prevent success in desired careers
2. Career decision making
   a. Know that career decision making is a narrowing process
   b. Know that career decision making is an ongoing process
   c. Know that career choices may occur at different ages
   d. Know that career choice is an individual decision
   e. Know that external factors can affect career choice
   f. Use decision-making skills in initiating career choice
   g. Recognize the importance of timing in career decision making
3. Career preparation
   a. Recognize the importance of adequate planning for entry into a career
   b. Understand that persons with broad education in a family or group of occupations tend to qualify for a number of specific occupations, thereby increasing opportunities for meaningful employment
   c. Demonstrate the ability to prepare a plan for entry into a possible occupation or career
4. Career modification or change

a. Recognize that people can modify and change careers
b. Recognize relevant factors bearing on possible career changes
c. Recognize advantages and disadvantages of making career modification or change
d. Recognize when it is advantageous to change or modify existing careers and occupations

5. Sources of additional knowledge
   a. Know sources and methods for obtaining additional knowledge for career development
   b. Participate in activities leading to more informed and realistic perception of career development
   c. Evaluate sources of information to determine their usefulness in gaining additional knowledge relating to career development

II. KNOWLEDGE, ABILITIES AND ATTITUDES NECESSARY FOR SUCCESS IN A CAREER OR OCCUPATION

A. Skills generally useful in careers

1. Numerical skills
   a. Know the applications of numerical skills in various careers
   b. Know how to perform basic numerical calculations
   c. Know metric measurements and how to perform simple calculations using metric measurements
   d. Read numerical values from graphs, charts and tables and understand their use
   e. Interpret statistical data from charts, tables and graphs
   f. Understand and calculate percentages, ratios and proportions
   g. Compare numerical values to determine extremes, central characteristics and trends
   h. Convert measurements into equivalent quantities on a different scale
   i. Estimate relative magnitude in numerical terms
   j. Perform calculations for jobs common to specific age levels
   k. Use graphs, charts and tables in making graphic representations of numerical quantities
2. Communication skills
   a. Recognize communication skills needed to become successful in careers
   b. Listen to and understand spoken and visual instructions, directions and information
   c. Read and follow written instructions, directions and information
   d. Read and understand pictorial, graphic and symbolic information
   e. Give directions, explain, describe and demonstrate clearly
   f. Give organized and informative oral presentations

g. Write organized, legible and articulate reports and summaries
h. Prepare concise letters, messages, want ads and telegrams

3. Manual/perceptual skills
   a. Identify and use common tools, fasteners and equipment to perform simple household or job tasks
   b. Read and understand gauges, scales and other common measurement instruments
   c. Construct, fabricate and assemble, using appropriate tools, equipment and materials
   d. Repair and maintain items common in households and occupations
   e. Plan and develop visual presentations
   f. Distinguish between adequate and inadequate construction and repairs
4. Information-Processing, problem-solving and decision-making skills
   a. Know specific procedures and principles used in information processing, problem solving and decision making
   b. Analyze information and define problems
   c. Collect and organize data
   d. Identify possible solutions and alternatives
   e. Make decisions or choose alternatives in terms of relevant criteria
   f. Implement plans
   g. Based on feedback, evaluate and modify plans
   h. Learn and apply procedures and principles that are basic to further learning
   i. Devise plans, new ideas and better ways of doing things
5. Interpersonal skills
   a. Know the importance of interpersonal skills
   b. Work and interact effectively with peers, teachers and supervisors
   c. Demonstrate effective leadership
6. Employment-Seeking skills
   a. Know where to find information regarding job openings
   b. Use appropriate procedures in applying for a job or position
7. Career-Improvement skills
   a. Know that most careers require the continuous attainment of new knowledge and abilities
   b. Know methods of gaining knowledge and abilities necessary to improve existing career and occupational skills
   c. Engage in activities that improve skills within a planned career

B. *Personal characteristics related to career success*

1. Responsibility and initiative
   a. Know that accepting responsibility and practicing initiative can contribute to job success
   b. Demonstrate the ability to plan for completion of an assigned

or accepted responsibility
   c. Use initiative when appropriate in performing an assigned or accepted responsibility
   d. Demonstrate resourcefulness and efficiency in accomplishing an assigned or accepted responsibility
   e. Know that good grooming, appropriate dress and health care contribute to job success
   f. Accept responsibility for one's own behavior
2. Adaptability to variable conditions
   a. Know factors that can cause changes in working conditions
   b. Adjust to varied work conditions
3. Attitudes and values
   a. Know the bases of various attitudes towards work
   b. Identify and analyze one's own attitudes towards work
   c. Recognize and evaluate the personal and societal consequences of one's own attitudes towards work
   d. Encourage and assist others to develop and use abilities to achieve maximum competence
   e. Recognize the contributions and abuses of various organizations and individuals to the well-being of society
   f. Recognize and appreciate effort, accomplishment and excellence in the completion of an accepted or assigned responsibility
   g. Value constructive work in terms of meeting societal goals
4. Personal fulfillment
   a. Know that people need to experience personal satisfaction and that one's own career can be a source of such satisfaction
   b. Establish personal goals that contribute to self-fulfillment
   c. Accept the diversity of career goals and lifestyles of others
   d. Seek personal fulfillment through achievement in school, career and personal life

CHAPTER 3

CYCLE II CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

I. KNOWLEDGE, ABILITIES AND ATTITUDES RELEVANT TO CAREER DECISIONS

One generally thinks of career planning in terms of high school or college students; however, career planning is a lifelong task of exploring and weighing alternatives. Even among 9-year-olds, there are behaviors that may affect future career decisions. These behaviors include a beginning awareness of abilities and interests, knowledge of common careers and recognition of the fact that some day they will need to accept adult roles. For high school students, career development includes making informal decisions and plans about entrance into a career. For adults already involved in a career, career planning means weighing their current occupational status in terms of interests and opportunities, followed by plans to improve current employment or engage in retraining for a change of career.

The process of identifying career alternatives involves integrating knowledge about oneself with knowledge of characteristics and requirements of different careers. This process is similar for persons seeking an initial career and for adults seeking new career options.

A. Awareness and knowledge of individual characteristics

Knowledge of one's own individual abilities, interests and values is the first step in career decision making. One should know the sources of self-knowledge and be willing to assess and use the knowledge obtained.

The sources of this type of information are similar to those used for obtaining information about careers, as well as those used in making and implementing career decisions. For convenience, and in order to avoid repetition, a single section on "Sources of Additional Knowledge" combines sources of information relevant to career decisions and is located in Section IC5. Readers should consider Section IC5 as an integral part of this section on individual characteristics.

1. Abilities

a. Know one's own abilities

Age 9:

Know one's own strengths in physical skills and sports, leisure and recreational activities, home and school responsibilities and interpersonal relations. For example, know that one can swim, run fast, fix some broken toys, clean house, perform simple gardening tasks, make friends easily and do well in school.

Recognize abilities in specific school subjects.

Ages 13, 17, adult (in addition to age 9):

Know activities in which one excels and in which one possesses less ability. For example, recognize that one can be better in mathematics and science than English, better in music than in physical education, better with a musical instrument than with a woodworking tool, more skillful than artistic, or better at speaking than writing.

Be able to recognize improvement of abilities with self-growth. For example, recognize that one is more responsible in completing assigned tasks than at a younger age, that physical growth has improved performance in a variety of activities or that one acquires new knowledge and ability each year.

b. Understand one's own abilities relative to those of others.

Age 9:

Understand one's own abilities relative to the abilities of siblings and peers. For example, compare one's running, drawing or spelling with that of others.

Age 13 (in addition to age 9):

Understand one's own interpersonal abilities relative to others. For example, know whether one meets and interacts with other children and adults more easily than one's peers or siblings do.

Age 17, adult (in addition to age 13):

Understand how to relate one's own abilities in specific areas as compared with a variety of other groups. For example, mathematical ability may be greater than that of peers and

most adults but weak when compared to that of professors of mathematics. Ability in most sports may be less than that of peers and most adults, while ability to type may be greater than that of most typists.

c. Recognize the multiple causes and effects of abilities

Age 9:

Recognize that abilities may be the result of determination, education, environment, experience, heredity and practice.

Recognize that experiences in some school subjects can improve other abilities. For example, experiences in reading can improve ability to build models.

Recognize that awareness of strengths may contribute to feelings of self-worth.

Ages 13, 17, adult (in addition to age 9):

Recognize that one may have greater opportunity for education and experiences than others. For example, understand that a person from a poor community may have less ability in sports that require expensive equipment and travel, and that a person from one community may have greater ability in science because the school district is wealthy and has well-equipped and well-staffed science laboratories.

Recognize that strengths and limitations can affect a number of activities. For instance, ability in writing can affect school performance, job applications, on-the-job performance and ability to provide written responses to social and political issues. Lack of interpersonal skills can affect team sports, leisure activities and other activities involving groups of people.

2. Interests

a. Know one's own interests

Ages 9, 13:

Know one's own likes and dislikes and be able to discriminate between them in a variety of leisure and home activities, such as being aware that one likes reading better than sports, likes riding bicyles and dislikes solving puzzles, likes group games

better than playing by oneself, likes caring for pets and dislikes cleaning one's own room, or likes outdoor tasks better than working indoors.

Ages 17, adult (in addition to ages 9, 13):

Know that one can have an interest in an area without necessarily having an ability or an obligation to develop a career in that area.

b. Understand one's own interests relative to those of other individuals

Ages 9, 13:

Understand that things one enjoys doing might not be enjoyed by others. For example, recognize that one enjoys sports while others enjoy reading and that one enjoys playing outside while others enjoy playing indoors.

Ages 17, adult (in addition to ages 9, 13):

Understand that differences may exist between one's own interests and those of others and may require compromise for resolution. For instance, student preference for school curriculum may differ from parental preferences or teacher and school administration programs.

c. Recognize the multiple causes and effects of interests

Age 9:

Recognize that interests are often the result of experiences and may change as a result of future experiences.

Recognize that an understanding of one's own interests may contribute to a feeling of self-worth.

Age 13, 17, adult (in addition to age 9):

Recognize that interests help determine the selection of one's friends and activities such as pastimes, elective school subjects and part-time jobs.

Recognize that social class and social pressures may influence interests. A person could develop an interest in golf and tennis because friends engage in these sports, for instance.

3. Values

a. Know one's own values

Age 9:

Begin discovery of one's own current values. For example, one may discover in a values-clarification exercise that security and stability are presently more important to one than change and freedom.

Age 13 (in addition to age 9):

Know one's own current values among a list of commonly held personal values. For example, know that prestige, independence, affluence or an opportunity for change may be more important to one than security, an opportunity to be creative or an opportunity to serve others.

Ages 17, adult (in addition to age 13):

Be able to discriminate among more complex or subtle values. For example, know that while independence may be important, some security may also be needed to establish a safe base within which to feel free; know that prestige may be derived from accomplishment rather than from wealth.

b. Understand one's own values relative to those of other individuals

Age 9:

Understand that things that are important to oneself – for example, responsibility – might not be important to others.

Understand that many people often hold similar values – for example, members of a camping club may hold similar values toward preserving forests in their natural state.

Ages 13, 17, adult (in addition to age 9):

Understand that differences may exist between one's own values and those of others. People who are closely associated in school, at work or as a family may hold different values toward religion, responsibility, loyalty and affluence.

c. Recognize the multiple causes and effects of values

Age 9:

Recognize that values are often the result of experiences and modeling and may change as a result of future experiences.

Recognize that values help determine the activities to which one is willing to devote time.

Recognize that values may influence the selection of friends.

Recognize that an understanding of one's own values may contribute to a feeling of self-worth.

Ages 13, 17, adult (in addition to age 9):

Understand that social class and social pressures may influence values. For example, a person may begin to value education by associating with others who regard education highly.

Recognize that values help determine one's life style and the activities to which one is willing to devote money, time, energy and personal allegiance.

B. Knowledge of career and occupational characteristics

In addition to self-understanding, a person must be familiar with the characteristics and requirements of different occupations. Before considering entry into an occupation, a person should be familiar with the primary duties to be performed, the entry requirements, the need for special abilities and the available benefits. A factor of growing importance is the manner in which a career or occupation affects living conditions, peer groups and lifestyles.

The sources of additional knowledge about the characteristics and requirements of different occupations is found in section IC5. Readers should consider section IC5 an integral part of this section on characteristics and requirements of occupations.

1. Major duties

a. Know the major duties of specific occupations

Age 9:

Know the main functions of highly visible occupations such as

teacher, homemaker, store clerk, waiter/waitress, doctor, nurse, service station attendant, police officer, fire fighter, farmer, mail carrier, barber and lawyer.

Know the major duties family members perform in their respective occupations.

Age 13 (in addition to age 9):

Know the major duties of common occupations such as dentist, engineer, architect, social worker, teacher, secretary, bank teller, carpenter, plumber, painter and service station attendant. For example, know that the major duties of an architect include designing homes and buildings, preparing specifications for construction, supervising construction and authorizing necessary or requested changes.

Ages 17, adult (in addition to age 13):

Know the major duties of a wide range of occupations such as personnel manager, accountant, bookkeeper, lawyer, librarian, dental technician, computer operator, photographer, cosmetologist and chef. For example, know that the major duties of a computer operator involve operating a variety of machines, including card punch machines, card sorters, collators, printers and a number of different types of computers.

2. Entry requirements

   a. Know the entry requirements of different occupations

      Age 9:

      Know that some occupations require more education than others. For instance, know that doctors and teachers go to school longer than barbers and mail carriers.

      Know the major knowledge or skill requirement for some high-visibility occupations. For example, know that home-construction workers must be skillful in the use of a variety of tools.

      Age 13 (in addition to age 9):

      Know the relevance of school curricula to occupations. Know what courses to take to obtain jobs as draftspersons and mechanics, what courses in English are relevant to careers as

writers, what classes will be useful for homemaking, what courses to emphasize for careers as biologists, and so on.

Know relative levels of education required for related occupations. For instance, know that engineers go to school longer than technicians, that doctors go longer than nurses, that airline pilots receive more training than flight attendants and that machinists receive more training than drill-press operators.

Know the multiple worker abilities required for common occupations. For example, know that the abilities of an architect include translating a client's needs into plans for a home or building, application of design principles and knowledge of materials, building construction and building codes.

Ages 17, adult (in addition to age 13):

Know the education requirements for a wide range of occupations. Know, for example, that doctors must intern following their academic training, that plumbers must work several years as apprentices and that many occupations such as file clerk, taxi driver or nurse's aid usually require only a short period of on-the-job training.

Know that many professional and technical fields will require continuing education after employment.

Know the length of school required for various academic degrees. For example, know that an associate degree requires two years beyond high school; a bachelor's degree, normally four years beyond high school; a master's degree, one to two years beyond a bachelor's; and a Ph.D or M.D., three to four years or more beyond a bachelor's.

Know that there are alternate routes to some occupations. For example, know that formal education may not be the sole means of entry; and that experience can be obtained in the military service as well as in formal schools.

Know the specific nonacademic entry requirements for various occupations. Know, for example, that union membership is required in order to hold many jobs, that state and local licensing is required for many jobs and that capital investment is necessary to set up a business or office as a doctor or engineering consultant.

Know that many occupations require some form of written

examination prior to entry and that these requirements vary among the states. Recognize, for instance, that lawyers must pass a bar examination before practicing in a specific state.

3. Work conditions

   a. Know differences in work conditions among different occupations

      Age 9:

      Know major ways occupations differ. Understand, for example, that occupations can be classified as physical or mental, indoor or outdoor, work with people or work with things, work in one location or work that involves travel, and work with few or many opportunities for advancement.

      Age 13 (in addition to age 9):

      Know which occupations fit into different categories. Know, for instance, that a manufacturing employee works inside and a construction worker often works outside, that a plumber does more physical work than a lawyer, that a nurse may have to work nights, that a salesperson often must travel and be away from home and that a typist must sit for long periods of time.

      Know the effects of public demand and popularity upon income in such occupations as writing, acting and professional athletics.

      Know relative income levels for common occupations. For example, know that business executives earn more money than clerical employees, that skilled workers earn more than unskilled workers and that airline pilots earn more than flight attendants.

      Know that people in some occupations have more chance for advancement than others. A large manufacturing company, for instance, provides more opportunity for advancement than a small company.

      Ages 17, adult (in addition to age 13):

      Know that certain people, such as artists, game wardens, housekeepers and civil engineers, have minimum work contact with others.

Know that certain occupations, such as those in professional sports and the military, normally have early retirement.

Recognize that recent laws have emphasized equal opportunity for all, including equal opportunity for available promotions.

Recognize that the self-employed advance only through expansion of business or services, and that beginning one's own business may be the best way for advancement. A service station attendant, for instance, might become the manager of a self-owned station or the manager of a franchise station, or a lawyer may establish his own law firm.

h. Understand that differences in work conditions influence the lifestyle of workers and their families

Ages 9, 13:

Recognize that occupations often influence lifestyles. Recognize, for example, that truck drivers are frequently away from home, that farmers sometimes work long hours, that production jobs sometimes require night work and that flight attendants travel long distances and are often away overnight.

Ages 17, adult (in addition to ages 9, 13):

Understand that shift work may require special family arrangements because it often involves weekend and/or night work.

Understand that family responsibilities often must be met by a husband or wife when the other must travel away from home for extended periods of time.

Understand that friendship groups are often formed among people working together and that a person's occupation or career often helps determine social contacts and leisure activities.

Understand that income variations among different occupations and careers help determine lifestyles, social contacts and leisure activities.

Understand that occupations that place people in the public limelight create unusual pressures on both themselves and their families.

c. Recognize that work conditions may conflict with individual interests and values

Age 9:

None

Age 13:

Recognize that many occupations may not be available in a given geographical area, thus requiring one to choose a different occupation or relocate.

Recognize that occupations that require long hours may conflict with avocational and social activities, as well as home life.

Recognize that some occupations provide limited incomes, which may conflict with interests in travel and social activities.

Ages 17, adult (in addition to age 13):

Recognize that risk is often involved in starting a new business or entering a new enterprise. For example, capital can be lost if a business fails, and credit ratings can be destroyed by bankruptcy.

Recognize that many occupations require or strongly encourage membership in social or fraternal groups.

Recognize that the time and effort required to start a new business may conflict with the amount of time and effort devoted to family or community responsibilities.

Recognize that some occupations foster conformity rather than individualism.

4. Benefits and employment practices

a. Know employment benefits – including social security, medical, vacation and retirement benefits – related to occupations.

Age 9:

Know that people retire when they are older and that most receive income from social security when retired.

Age 13 (in addition to age 9):

Know that social security paid to retired people is based on contributions that they made while working and that medicare is a medical plan available through social security.

Know that most companies provide benefits in addition to social security; understand different types of benefits, including retirement, medical and dental services, paid vacation, paid holidays and various types of life insurance.

Ages 17, adult (in addition to age 13):

Know that some companies provide benefits in addition to those cited. For example, some companies have vacation areas available to employees, some provide bonuses and some provide special insurance packages.

Understand the benefits of workmen's compensation and recognize that the law provides these protections by requiring the participation of employers.

Understand the benefits provided by social security, including paid retirement, medicare and family financial protection in case of worker injury or death.

Understand that social security is not a savings plan in which workers put aside funds for their retirement, but a system that pays retired persons out of money collected from currently employed workers.

Know that retirement benefits, with the exception of social security, might be lost when a company fails, and that laws have been passed to protect workers from loss when companies fail.

Recognize that special retirement provisions have been made for the self-employed and that they are eligible for social security and may establish additional retirement benefits.

b. Know legal requirements protecting persons seeking employment

Age 9:

None

Age 13:

Know that hiring practices should be based on the best qualified and that despite laws, some employers still discriminate based on race, sex, age, religion, social class and handicaps.

Ages 17, adult (in addition to age 13):

Know the agencies that protect the rights of individuals seeking employment, when legal action is possible against employers practicing discrimination and how to obtain legal advice.

c. Recognize factors that encourage or discourage formation of labor and management organizations

Age 9:

None

Age 13:

Recognize that different labor unions represent different occupations, and that labor unions bargain with management for increased wages and better working conditions.

Recognize that some jobs require a person to join a union and pay dues to the union.

Recognize that the need and desire for labor organizations increases when workers believe they are being treated unfairly, and that the strength of labor groups may vary between areas and occupations.

Ages 17, adult (in addition to age 13):

Recognize that some management groups have seen a need to organize in order to gain improvement in salary and working conditions for themselves.

d. Compare and evaluate specific occupations in terms of employee benefits

Age 9:

None

Age 13:

Compare employee benefits of people who are self-employed and people who work for others.

Ages 17, adult (in addition to age 13):

Compare a variety of different occupations in terms of employee benefits; identify potential benefits of each, weighing benefits and other characteristics in terms of career goals.

5. Social and technological change

   a. Recognize that social and technological changes can modify entry requirements and job responsibilities necessitating adjustments in career planning and preparation

      Age 9:

      None

      Age 13:

      Recognize that technological changes continue to modify the knowledge and skills needed for specific occupations. For example, replacement of most vacuum tubes with solid state components requires new skills and knowledge for the TV repairperson; use of smog devices on automobiles requires new skills and knowledge for the auto mechanic; use of plastic plumbing lines requires new skills and knowledge for the plumber; and each of the above changes requires new knowledge for engineers, designers and all people working in these industries.

      Ages 17, adult (in addition to age 13):

      Recognize that social changes are beginning to make occupational entry requirements more realistic. Some educational institutions, for instance, are modifying requirements for credentials, and some companies are reevaluating requirements of college degrees for some occupations and eliminating the requirement.

   b. Understand that technological, economic, political and social changes result in decreases in the availability of some kinds of occupations and increases in others

Age 9:

Understand that social and technological changes create new types of occupations – such as space technicians, environmental control technicians and computer operators – and tend to render some jobs, such as elevator operators, obsolete.

Age 13 (in addition to age 9):

Understand that technological, economic, political and social changes result in decreases in the availablity of some kinds of occupations and increases in others. For example, know that the number of telephone operators decreases with increased use of automatic switching, that the number of teachers needed will decrease with a drop in the number of school-age children, and that the need in recreational occupations increases as the work week shrinks and more people have time for recreational activities.

Ages 17, adult (in addition to age 13):

Understand employment trends and relate new technological discoveries and economic trends to occupations and careers.

Understand that social, economic, political and technological changes more often change the need for specific occupations than eliminate them entirely.

Understand that new discoveries and inventions in business and industry change the need for various kinds of skills. There is, for example, reduced opportunity in mining and assembly work and increased opportunity in service and computer industries.

Understand that technological factors, such as automation, can eliminate repetitive tasks and that exhaustion of a resource, such as uranium, can eliminate all related occupations in a given geographic area.

Understand that the major trends in the job market are towards specialized technical and service-oriented occupations.

Understand that government policies can increase or decrease employment possibilities, that increases in government services normally mean increased employment and that decreases in government services usually decrease employment.

Understand that the government exercises control over the economy through a variety of fiscal restraints. For example, raising interest cost to banks may affect the availability of money for construction.

Understand that employment opportunities can be changed by the government. The government's interest in space exploration, for example, created a space-exploration industry with many jobs, increases in defense spending raise employment in manufacturing companies providing military supplies to the military services and decreases in government interest can depress an industry and cause employment opportunities to disappear.

c. Accept the effects of social and technological changes on availability and desirability of specific careers and occupations

Ages 9, 13:

Accept that traditional male/female roles are being modified and that sex bias in employment is gradually decreasing. Females, for instance, are finding increased employment opportunities as engineers and business administrators, and males are finding increased employment as nurses and elementary school teachers.

Ages 17, adult (in addition to ages 9, 13):

Accept that social changes are beginning to make more occupations and careers available to members of minority groups.

Accept that concerns for the quality of life are beginning to make careers and occupations that waste resources and contribute to pollution less desirable than careers and occupations serving people and mankind. For example, social service and health-related occupations have become popular.

Accept that societal changes and changes in world resources can alter the availability and need for specific occupations. The energy crisis, for instance, has increased the need for people in developing and identifying new sources of energy such as nuclear power, oil exploration and solar power.

6. Occupational classifications

a. Know that many occupations possessing similar characteristics can be grouped into occupational families or clusters

Ages 9, 13:

Know which occupations are in the same broad classification. Know, for example, that service station attendants, mail carriers, appliance-service technicians and tailors are involved in service occupations.

Ages 17, adult (in addition to ages 9, 13):

Know general classifications of occupational clusters. Know, for instance, that the transportation cluster includes pilots, truck drivers and train conductors, and that the health cluster includes doctors, nurses, dental technicians and occupational therapists.

b. Recognize occupational classifications such as public/private, profit/nonprofit and union/nonunion

Ages 9, 13:

Recognize that some people work in public jobs, such as mail carrier, fire fighter, police officer or teacher, while others work for private companies, such as those manufacturing automobiles, repairing appliances or selling homes.

Ages 17, adult (in addition to ages 9, 13):

Recognize that "nonprofit" is a legal term describing many agencies that are working for the good of the general public, such as hospitals and organizations like the American Red Cross.

Recognize that "for profit" is a legal concept describing companies or agencies interested in financial gain, such as manufacturing companies, sales companies and service companies.

Recognize that some occupations, such as management positions, are normally nonunion, while others such as the electrician trades are highly unionized.

Recognize the major classification of occupational groups, such as professional and technical workers, managers and

administrators, sales workers, clerical workers, service workers and farm workers.

c. Understand the differences in duties, responsibilities and entry requirements between different occupations within an occupational cluster or family

Age 9:

None

Age 13:

Within high-visibility occupations within the same cluster, recognize differences in education requirements, salaries and responsibilities. For example, in the health occupations, know that a doctor needs more special training than a nurse, that a doctor is usually paid more than everyone else in the health group and that a nurse is responsible for patient care as directed by the doctor.

Ages 17, adult (in addition to age 13):

Understand differences in responsibilities within occupational families or clusters. Know, for instance, that an architect is responsible for all planning and design, that a contractor is responsible for making certain that plans are followed, that carpenters and other tradespersons are responsible for construction and that construction laborers assist the tradespersons.

Understand the trend that enables persons with broad education in a family or group of occupations to qualify for a number of specific occupations. Know, for example, that high school training in construction permits initial employment as an apprentice in a variety of construction occupations including carpentry, plumbing, electrical work, bricklaying and metal working.

C. *Making and implementing career and occupational decisions*

As one grows with self-knowledge and learns about the characteristics and requirements of different careers, one is able to identify alternatives from which one can eventually choose a career. The process of career choice involves the integration of knowledge of individual characteristics with knowledge of careers and occupations. Throughout

one's working career, from first choices to those made late in life, career options can be narrowed by eliminating careers that are not compatible with individual characteristics.

It is important that individuals understand the process of identifying career alternatives while preparing for career entry, changing careers and advancing within a career.

1. Individual characteristics and occuptional requirements

   a. Recognize that abilities, interests and values affect career choice

      Ages, 9, 13:

      Recognize that most people choose activities in which they are successful and reject those in which they are unsuccessful.

      Recognize that most people choose activities that they like and reject those they dislike.

      Recognize that most people choose activities that are important to them and reject those that are less important to them.

      Recognize that current abilities, interests and values may lead to future education or career options.

      Ages 17, adult (in addition to ages 9, 13):

      Recognize that people having careers matched with abilities, interests and values have a greater potential for career success and advancement.

      Recognize that careers that are compatible with special abilities, interests and values can provide job satisfaction and positive self-appraisal.

      Recognize that people, because of conflicts with values, desired lifestyle or interests, sometimes reject careers in which they have potential.

   b. Identify occupational characteristics that are congruent with one's own abilities, interests and values

      Age 9:

      Identify activity characteristics that are enjoyable, such as

doing something inside or outside or doing something with friends or by oneself.

Identify activities that use one's own abilities to advantage, such as running games for one able to run fast or spelling games for one able to spell words correctly.

Age 13 (in addition to age 9):

Identify desirable occupational characteristics for possible part-time employment. The list might include earnings, working hours, types of associates, opportunity to learn on the job, opportunity for advancement, distance to travel and whether work is inside or outside.

Relate one's own skills and abilities to potential part-time jobs. Identify, for example, skills and abilities that can be used in part-time jobs, such as babysitting, gardening, mowing lawns, stocking merchandise, delivering papers, sewing garments, cleaning houses, serving as waiter or waitress or working in volunteer activities.

Age 17 (in addition to age 13):

Identify careers that require one's own strengths and abilities.

Identify desirable occupational characteristics. The list might include earnings, prestige, promotional opportunities, hours and work environment.

Identify types of occupations most likely to satisfy personal interests and values. For example, construction occupations are satisfying for people interested in working with their hands and seeing the physical results of their labor.

Relate one's own developing skills and abilities to potential careers. For instance, match skills and abilities in life sciences and interpersonal relationships with careers in health services, a successful hobby of rock collecting with a career in geology, a successful experience in 4-H clubs with an agricultural occupation, and awards for sewing with apparel-making occupations.

Adult (in addition to age 17):

Identify types of occupations in addition to the present one

that would provide job satisfaction or that would utilize abilities to a fuller extent.

Identify additional occupational characteristics that are important. The list might include fringe benefits, safety, opportunity to speak freely, employer recognition of responsibility to society and employer ethics.

c. Recognize that many limitations can be overcome and do not necessarily prevent success in desired careers

Age 9:

Recognize that many limitations are the result of insufficient experience and can be overcome by study, practice, determination and future experience.

Age 13 (in addition to age 9):

Recognize that some limitations are the result of physical or mental shortcomings, but that many of these can be overcome by study and practice or by medical or psychological help. For example, a reading deficiency can often be corrected through special courses and reading programs, poor vision that often affects reading may be corrected with glasses or surgery and personal problems that affect learning can sometimes be solved with professional help.

Ages 17, adult (in addition to age 13):

Recognize that some limitations are offset by strengths. Speed and accuracy, for example, can help make a short person a successful basketball player, and ability to meet and work with people can help make a salesperson successful even though a lack of technical skills may prevent the salesperson from understanding the operation of the product being sold.

Recognize that some limitations virtually eliminate some careers. For instance, lightweight and small people have little chance of success in pro football, minimum mechanical ability eliminates most people from being sheet metal workers, and fear of heights and motion sickness eliminates airborne positions.

Recognize those deficiencies that one can improve and those for which one must compensate. For example, a blind person

can compensate for blindness by gaining better use of other senses but generally cannot improve sight.

2. Career decision making

a. Know that career decision making is a narrowing process

Age 9:

None

Ages 13, 17, adult:

Know that career choice involves matching career characteristics of abilities, interests and values.

Know that the narrowing process seldom identifies one best career for a person, but that many different but related careers may satisfy or suit a person's needs and abilities.

b. Know that career decision making is an ongoing process

Age 9:

Know that career choices often change as one grows older.

Ages 13, 17, adult (in addition to age 9):

Know that a person may have many different occupations during a lifetime.

Know that it is possible to change career plans during preparation, that the penalty in time and effort varies with different careers and training programs and that it is valuable to change when changes in individual or career characteristics alter the desirability of the career.

c. Know that career choices may occur at different ages

Age 9:

None

Ages 13, 17, adult:

Know that it is desirable to delay career choice until enough

knowledge regarding individual characteristics and potential careers is obtained. At the same time, know that some people choose a career as a goal at an early age while others delay the choice.

Know the value of maintaining a number of career alternatives while delaying career choice.

Know that making a career choice is a desirable goal when adequate knowledge has been obtained.

d. Know that career choice is an individual decision

Age 9:

None

Ages 13, 17, adult:

Know that people who choose a career based on individual judgment are more likely to be satisfied with the decision than others who have career decisions made by parents or peers, or who simply drift into an occupation.

Know that career decision making is a process requiring time and thoughtful consideration.

Know that job availability should be given serious consideration, that chances for placement in declining occupations are slim and that a surplus of applicants in any occupation makes obtaining a job in that occupation more competitive.

e. Know that external factors can affect career choice

Age 9:

None

Ages 13, 17, adult:

Know that personal and external factors must be taken into consideration when making career plans. Such factors might include finances needed to contribute income to family support, time and money requirements of training, parental attitudes, family influence, societal needs, possible cultural obstacles, racism and sexual discrimination.

Know that time-consuming and costly educational process may eliminate some careers for people having limited economic resources. Know that while these factors may provide obstacles for people with limited economic resources, these factors can often be overcome by various scholarship and loan programs, after-school jobs and other career programs sponsored by groups such as "Upward Mobility."

Know that economic conditions often force immediate career choice. For example, a young couple without outside support may have to make career choices based on the welfare of their dependents.

Know that career choice is often influenced by availability of jobs in desired geographic locations.

Recognize that it may be advantageous to choose a temporary career to insure part-time or temporary employment. Secretarial skills, for example, might be obtained to provide employment while preparing for a career as a lawyer or engineer.

Recognize the significance of the cost of training programs, that length and expense of training programs must be weighed against possible experience and earnings during the same period.

f. Use decision-making skills in initiating career choice

Ages 9, 13:

None

Ages 17, adult:

In selecting a career or occupation or in identifying career alternatives, use career decision-making procedures, including some of the following:

- Gain knowledge of self and knowledge of possible careers and occupations.
- Identify career and occupational options by matching knowledge of self with career information.
- Narrow career options in light of availability of positions and need for additional personnel within the career,

training period required, cost of training, availability of training programs and training program entry requirements.

- Gain additional knowledge about remaining career options.
- Test career options until a desirable choice is identified.
- Evaluate choice in terms of changing personal characteristics and career information.
- Reevaluate choice, as appropriate.

g. Recognize the importance of timing in career decision making

Ages 9, 13:

None

Ages 17, adult:

Recognize that some jobs have periods of time when employment possibilities are greatest. For example, positions in teaching and school administration are often filled in the spring for employment in September, positions in department store sales increase in the fall prior to Christmas and resort jobs are seasonal.

Recognize that entry during a busy period will often provide experience for a more permanent position.

Recognize that being present and available when a job becomes available adds to your chances of obtaining the job, that many companies will only take applications as jobs are available and that some companies will keep applications on file for only a limited period of time.

Recognize that age is a factor in many occupations. For example, initial entry into apprenticeship and employment as a flight attendant have age ranges for initial employment.

3. Career preparation

a. Recognize the importance of adequate planning for entry into a career

Age 9:

None

Age 13:

Recognize that one of the early steps in planning a career is the selection of appropriate school courses or program based on interests and abilities as well as possible career choices.

Ages 17, adult (in addition to age 13):

Recognize that many people fail to adequately plan for careers, often failing to select careers that meet their potential, provide self-fulfillment or contribute to a desired lifestyle

b. Understand that persons with broad education in a family or group of occupations tend to qualify for a number of specific occupations, thereby increasing opportunities for meaningful employment

Age 9:

None

Ages 13, 17, adult:

Understand that the grouping of occupations into families or clusters, such as service industries and manufacturing industries, provides both information for career selection and broadened opportunity for career entry.

Understand that employers are often interested in hiring employees who have broad experiences that will permit their employment in a number of different jobs. For example, high school or community college training in graphic communications will permit initial employment as an apprentice or beginner in occupations such as drafting, illustrating and cartography.

c. Demonstrate the ability to prepare a plan for entry into a possible occupation or career

Age 9:

None

Age 13:

None

Ages 17, adult:

Demonstrate familiarity with a variety of career preparation procedures, such as:

- informal training via military programs, apprentice-training programs, on-the-job training programs, self-study and volunteer work.

- formal training via high school, community college, technical college, four-year college or university, professional or graduate school, specialized school or college, proprietary school and correspondence courses.

Resolve conflicts in vocational choice; for example, consider practical alternatives, solve differences between own goals and desires of parents and between abilities and unreasonable aspirations.

Reappraise one's own current school or training programs to insure that appropriate occupational and/or academic requirements will be met and modify plans to overcome any deficits.

Plan sources and extent of financial aid such as part-time employment, cooperative work-study programs, apprenticeship-training programs, parental assistance, personal savings, possible athletic and academic scholarships, special-assistance programs for the educationally deprived, and loans; identify the requirements and restrictions associated with each source of financial aid.

Investigate schools, training programs and employment opportunities suited to one's own goals, capabilities and financial resources; visit or correspond with appropriate educational institutions.

4. Career modification or change

   a. Recognize that people can modify and change careers

      Ages 9, 13:

Recognize that many people change careers and occupations and do not stay in one occupation all their lives.

Ages 17, adult (in addition to ages 9, 13):

Recognize that while it is possible for one to modify or change a career, such a modification or change requires considerable prior planning.

Recognize the importance of knowing possible alternative careers and the characteristics of these alternative careers when making plans for a career change.

Recognize that the process for selecting an alternative career is similar to the process for selecting a career.

Recognize that it is often simpler to change careers within a profession or between occupations having minimum entry requirements than between unrelated professions or occupations having specific entry requirements. For example, a change from high school English teacher to social science teacher, or from sales clerk to waitress or waiter, may be easier to make than a change from engineer to doctor, or from computer programmer to dental technician.

b. Recognize relevant factors bearing on possible career changes

Age 9:

Recognize that people change careers to make more money, to broaden experiences, to meet new people or to find jobs that provide greater satisfaction.

Recognize that people also change careers because the work is finished and the jobs are terminated.

Recognize that people modify and change careers because of changes in their interests, values, abilities and experiences.

Age 13 (in addition to age 9):

Recognize that many career changes are really promotions involving more responsibility and salary, such as a teacher becoming a school administrator, a carpenter becoming a contractor and a cosmetologist becoming a salon or style-shop manager.

Recognize that some career changes are voluntary while others are necessary due to elimination of jobs, sickness, accident or poor performance. For example, automation can eliminate assemblers, a heart condition can ground an airline pilot, and loss of vision in an accident can force a copy editor to change jobs.

Recognize additional factors that might lead a person to change a career or occupation. For example, income, personal satisfaction, job security, family situations, career goals, prestige, discrimination, physical and mental demands of position, additional training or early retirement.

Ages 17, adult (in addition to age 13):

Recognize that there are conditions in specific situations that warrant immediate considerations for changing jobs. For example, no opportunities for advancement exist, exploitation without possibility of recognition, pending layoff or job termination, serious conflicts with supervisors, internal political involvement, health hazards, unlawful or unethical company activities, and approaching age or physical condition that no longer permits expected level of performance.

Recognize that career changes often require additional education and training, and that this preparation might take a considerable period of time. For example, a secretary interested in becoming a business teacher must meet entry requirements for teaching and a medical doctor interested in becoming a lawyer must prepare for the bar examination.

Recognize that personal responsibilities may delay plans to change careers. For example, responsibility for family members or waiting for spouse to complete career preparation procedures.

c. Recognize advantages and disadvantages of making career modification or change

Age 9:

None

Age 13:

Recognize possible advantages and disadvantages that may

accompany career changes. For example, earnings may increase or decrease, promotion or demotion may occur, work environment may improve or deteriorate, fringe benefits may increase or decrease, climate in new location may be better or worse, family may be affected favorably or unfavorably, career goals may recede or come within reach, pressures for additional training may increase or decrease, prestige may suffer or improve, compatibility with lifestyle may be diminished or enhanced and potential for self-fulfillment may be higher or lower.

Recognize the consequences of advancement in some occupations. For example, know that the nature of the work of supervisors is different from the work required in lower levels, that the responsibilities of higher-level jobs may produce greater pressures and that persons can be promoted in some occupations only if they accept new positions in other locations.

Ages 17, adult (in addition to age 13):

Recognize that advancement is sometimes used to place people in less influential positions or to decrease the effectiveness of their work and policy contributions.

Recognize that a variety of outside factors can affect how one feels toward a career, that changing careers may not change these factors and that changing jobs may entail or include, or may be accompanied by, a new set of problems.

d. Recognize when it is advantageous to change or modify existing careers and occupations

Age 9:

None

Age 13:

None

Ages 17, adult:

Recognize that there are conditions in specific situations that warrant immediate considerations for changing jobs. For example, no opportunities for advancement, being exploited without possibility of recognition, pending layoff or job termi-

nation, serious conflicts with supervisors, internal politics, health hazards, unlawful or unethical company activities, approaching age or physical condition no longer permits expected level of performance.

Recognize that career changes are often accompanied by preparation to meet entry requirements, that this preparation might take a considerable period of time. For example, a secretary interested in becoming a business teacher must meet entry requirements for teaching, a medical doctor interested in becoming a lawyer must prepare for the bar examination.

Recognize that personal responsibilities may delay plans to change careers. For example, responsibility for family members or waiting for spouse to complete career preparation procedures.

5. Sources of additional knowledge

   a. Know sources and methods for obtaining additional knowledge for career development

      Age 9:

      Know that additional knowledge for career development can be obtained from peers, parents, other family members and teachers. Know that part of studies in school can include occupational information and knowledge regarding career development, and that school tests are one way of acquiring information regarding individual performance and ability.

      Know that knowledge of oneself can be obtained through self-appraisal of performance and activities.

      Age 13 (in addition to age 9):

      Know that additional knowledge for career development includes knowledge of individual characteristics, occupational characteristics and requirements, making career decisions, preparing for a career and modifying or changing careers.

      Know that, in addition to parents and teachers, school counselors can provide knowledge for career development.

      Know that special tests can be taken to identify or gain further information about interests, special abilities and aptitudes.

Know that knowledge about careers can be obtained from library books and pamphlets, visits, films and filmstrips and by talking with people employed in various occupations in the media.

Know that some families and groups wish counseling activities to occur only between parents and children.

Ages 17, adult (in addition to age 13):

Know that counseling and testing for career development are available through vocational and public schools, colleges and universities, employment and community agencies and occupational entry and retraining centers such as career centers and guidance and counseling centers.

Know that information regarding careers and career preparation can be obtained from college catalogues, special publications such as the *Handbook of Job Facts* and the *Occupational Outlook Handbook*, industrial training brochures and by visiting companies and places of business. Know that most references contain information showing required study, length of training time, cost, financial aid available, alternative methods of preparing for careers and quality of training and placement assistance.

b. Participate in activities leading to more informed and realistic perception of career development

Age 9:

Discuss one's own interests and abilities with teachers and/or parents. For example, talk about activities one likes and dislikes and about problems and successes one has had in school subjects.

Participate in activities leading to more informal and realistic perception of one's own interests and abilities. For instance, look at and read different books and magazines, have hobbies, do informal jobs, play many kinds of games and sports and go to various community events and places of interest.

Participate in activities providing information on career characteristics. For example, ask teachers, counselors and other adults about what they do at work and what different workers do on their jobs; visit factories, dairies and businesses; see films that describe jobs.

Read about people successful in different occupations.

Age 13 (in addition to age 9):

Discuss present and future interests, abilities, goals and values with peers, adults and counselors in school.

Take special tests designed to identify interests, aptitudes and special abilities.

Engage in a variety of activities to obtain information about one's own characteristics. Discuss results of scholastic and vocational guidance tests; compare one's own evaluation of abilities with opinions of others whom one respects; use several sources of information to avoid judging from one exposure and participate in volunteer programs.

Age 17 (in addition to age 13):

Talk to counselors at schools, employment offices and training centers.

- Participate in career day programs.
- Seek information about a broad range of careers to maintain flexibility in planning.
- Seek information regarding employment needs in different careers, determining which have the greatest need for employees.

Adults (in addition to age 17):

Discuss present and future interests, abilities, goals and values with college counselors, counselors in public and private employment agencies and counselors in social welfare and other public and private agencies.

Discuss performance, interests and abilities with job supervisors, employers and, as appropriate, with families.

Seek information about careers congruent with their personal value systems, such as service to others and contributing to solutions of social, political and ecological problems in the community.

c. Evaluate sources of information to determine their usefulness in gaining additional knowledge relating to career development

Ages 9, 13:

Recognize that information received from others can be helpful in identifying strengths and limitations of which one was not previously aware.

Recognize that all of this information may not be accurate. For example, evaluations made at school on days when a person does not feel well may be too low, and evaluations based on homework may be high because of help from parents.

Ages 17, adult (in addition to ages 9, 13):

Evaluate the accuracy, reliability and relevance of information secured from different sources.

- Recognize that many sources of information are biased in favor of a career, that job characteristics can vary among companies and among geographic areas, that salaries and benefits for the same job often vary considerably throughout the country, that printed information may be old and not pertinent to existing conditions and that people may provide information based on limited or atypical experience.

- Recognize that observation and evaluation by others is helpful in assessing one's own ability, but is not necessarily correct or in agreement with self-assessment and may be based on limited knowledge and experience.

- Recognize that information from friends, relatives and employers may be inaccurate because of personal feelings coupled with the possibility that they are providing "socially acceptable responses." For example, family members may overestimate performance while an employer might give a positive evaluation to avoid a confrontation.

II. KNOWLEDGE, ABILITIES AND ATTITUDES NECESSARY FOR SUCCESS IN A CAREER OR OCCUPATION

Career success requires the knowledge, abilities and attitudes necessary to

perform successfully in a broad range of careers as well as the specific knowledge and abilities necessary for particular careers. This section will consider only knowledge, abilities and attitudes necessary to perform a broad range of careers.

A. Skills generally useful in careers

The major categories of skills generally useful in careers are numerical, communication, manual/perceptual, information-processing and decision-making, interpersonal, employment-seeking and career-improvement skills. Some of these categories apply to learning areas in the National Assessment other than career and occupational development (COD). For example, communication skills are related to both reading and writing, numerical skills are included in mathematics and information-processing and problem-solving skills include many science and social studies objectives. In order to minimize overlaps, practical job-related objectives have been selected to describe COD objectives.

1. Numerical skills

   a. Know the applications of numerical skills in various careers

      Age 9:

      Know that simple math is needed in many home activities. For example, know that many items are purchased in numerical quantity and that a bill paid to a store is the sum of all the items purchased.

      Age 13 (in addition to age 9):

      Know that math is needed in many part-time jobs. Know, for instance, that newspapers are counted and bills paid based on the number of newspapers delivered, and that virtually all jobs provide salaries and that the amount received is based on time worked or work accomplished.

      Ages 17, adult (in addition to age 13):

      Know that most jobs require the use of math skills, including counting, addition, subtraction, multiplication and division.

      Know that many jobs require advanced mathematics, algebra, trigonometry and statistics.

Identify math abilities needed for a variety of common careers and occupations.

b. Know how to perform basic numerical calculations

Age 9:

Know the processes involved in adding, subtracting, dividing and multiplying whole numbers.

Age 13 (in addition to age 9):

Know the processes involved in adding, subtracting, dividing and multiplying decimals, fractions and compound numbers.

Ages 17, adult (in addition to age 13):

Know the processes involved in converting ratios to percentages, taking percentages of given values and determining percentages of changes.

c. Know metric measurements and how to perform simple calculations using metric measurements

Age 9:

Know that metric measurements are used in other countries and will someday replace our system of measurement.

Ages 13, 17, adult (in addition to age 9):

Know basic metric measurements and terms including linear, area, volume and weight.

Know how to perform all calculations using metric measurements, including conversions between English and metric systems.

d. Read numerical values from graphs, charts and tables and understand their use

Age 9:

Read calendars; read simple bar, line and circle graphs; and read data from height-weight charts.

Tell tomorrow's date or the date one week from today by reading a calendar, tell what time it is now and two hours from now and determine how much one should weigh based on height from a height-weight chart.

Age 13 (in addition to age 9):

Read sales tax from a table, dimensions on drawings, distances on maps, drill- and bolt-size charts, canned fruit and vegetable weights and tables and charts with two variables.

Determine the amount of tax to charge using a sales tax table, describe the size of an object from the dimensions on a drawing of the object and explain the meaning of different map markings from the symbol-description portion of the map.

Ages 17, adult (in addition to age 13):

Read logarithmic charts and graphs, interpolate values from tables, extrapolate values from graphs, read income tax tables and read stock market prices.

Describe the amount of each ingredient from a recipe, and the income tax due for a specified taxable income.

e. Interpret statistical data from charts, tables and graphs

Age 9:

Explain meaning of letter grades and arithmetic averages and describe relative sizes, as of populations.

Age 13 (in addition to age 9):

Interpret batting averages, indicating average number of hits per times at bat; figure out trends from information such as population growth and accidents; explain information provided on a chart, table or graph.

Age 17 (in addition to age 13):

Recognize misleading assumptions, conclusions and statements in the use of statistics or presentation of data; describe central tendency from graphic presentation; interpret trends from information such as demands for products or change in num-

ber employed; interpret accident statistics and industrial failure rates.

Adults (in addition to age 17):

Interpret stock market figures and trends.

f. Understand and calculate percentages, ratios and proportions

Age 9:

Understand the concepts of twice and of one half. For example, understand that a dime is twice the value of a nickel, and a quarter is one half the value of a half dollar.

Age 13 (in addition to age 9):

Understand what is meant by a company's profit being given as a percentage of its total (gross) income; understand that profit on an item for sale is a percentage of the cost, added to the cost; solve simple ratio problems such as finding the size of a plot of land when it is known that it is three times the size of a known plot.

Ages 17, adult (in addition to age 13):

Understand what is meant by "directly proportional" and "inversely proportional," understand that the percentage of profit based on selling price is different than the percentage of profit based on cost.

Understand how to double or cut a recipe in half; calculate true interest rate and annual percentage rate; understand how to write a check and maintain checkbook records.

Change fractions to decimals in describing amounts of flour, sugar, etc. for inventory purposes.

g. Compare numerical values to determine extremes, central characteristics and trends

Age 9:

Arrange numbers, such as bit sizes or numbered drills, in increasing order of size; state where one of two given magnitudes is smaller, equal to or larger than the other; compare weight and size of two objects.

Age 13 (in addition to age 9):

Compare fractional drill sizes with lettered drills measured in decimals; determine which of two given drill sizes is larger, equal or smaller; compare prices of magazine subscriptions with single issue costs; and compare the areas of two geometric figures.

Ages 17, adult (in addition to age 13):

Compare interest rates of moneylenders, earnings from payments per hour versus piecework, savings on commuter books versus regular fees and costs per unit, such as the better buy of two items of canned goods. Compare gear ratios existing in truck and car transmissions and rearend assemblies; compare thrust of two jet engines; compare differential earnings from feeding livestock different lengths of time; compare purchase price with used selling price or pawned value; and compare cost of new items versus cost of used items.

h. Convert measurements into equivalent quantities on a different scale

Age 9:

Make change, total one's own purchases and do simple mental computations without figuring on paper.

Determine the number of cents in a given number and denomination of coins.

Age 13 (in addition to age 9):

Figure simple budgets for allowances, total bills of sale and determine the cost of a single item to the nearest cent (or to the next larger cent) when a unit price for a number is given.

Convert centimeters to meters, grams to kilograms, milliliters to liters.

Adjust dress patterns for accurate fittings.

Ages 17, adult (in addition to age 13):

Calculate sales tax, interest and carrying charges; balance bank

accounts; budget income; and project budgeted credit card expenditures and payments.

Convert room dimensions into square units of floor area; express time and distance measures in miles per hour; calculate miles per gallon of gasoline; figure amounts of liquid for fertilizer solutions given the ratio of the liquids; calculate cost of feeding each member of a family or group for a day, week, month and year.

Adult (in addition to age 17):

Determine income tax, calculate annual maintenance costs for automobiles and houses; determine both direct and indirect cost of a piece of equipment and calculate depreciation of an item.

i. Estimate relative magnitude in numerical terms

Age 9:

Estimate sizes of pieces of paper needed to wrap packages, and estimate time required to complete simple tasks.

Age 13 (in addition to age 9):

Estimate lengths of rooms, heights of persons and product and quotient of two whole numbers; estimate areas of simple geometric figures such as rectangles; estimate width of streets and size of windows; estimate distances in sports, as for races and setting up baseball diamond.

Age 17 (in addition to age 13):

Estimate areas of more complex geometric figures such as triangles, estimate floor areas in houses, estimate costs of weekend trip, estimate interest on principal and sum of interest and principal, estimate distances between cities and estimate weights of farm animals.

Adult (in addition to age 17):

Estimate time required to do jobs and travel to places.

j. Perform calculations for jobs common to specific age levels

Age 9:

Calculate number of cans of pet food to buy for a certain number of days, calculate how much candy to buy for a group of children and calculate the number of pieces of paper needed by a classroom of pupils to do a project.

Age 13 (in addition to age 9):

Calculate number of cans of paint required to paint a given area, and calculate pounds of meat needed to serve a specified number of people.

Ages 17, adult (in addition to age 13):

Calculate how long to cook roasts, calculate amount of feed needed for a given number of farm animals, calculate square yards of carpeting needed to cover floors and calculate number of sheets of plasterboard required to enclose rooms.

Calculate fuel needed to fly a plane across the country, given appropriate distances and rate of consumption; calculate bushels of seed needed to sow a given number of acres; calculate cost of gasoline for auto trips, given appropriate distances; calculate the number of sheets of plywood needed to cover a floor and the board-feet of lumber required to build objects; calculate yards of curtain fabric for a window or room.

k. Use graphs, charts and tables in making graphic representations of numerical quantities

Age 9:

Draw lines of specified whole-number lengths with rulers and color halves and quarters of circles.

Age 13 (in addition to age 9):

Construct line, bar and circle graphs to depict given data; draw geometric figures with given areas; make simple scale drawings of rooms; draw angles of a given size with a protractor.

Ages 17, adult (in addition to age 13):

Represent relative sizes of two given quantities by scaled drawings; plot points on coordinate systems; construct scale

drawing of a house, store and farm lot.

2. Communication skills

   a. Recognize communication skills needed to become successful in careers

      Age 9:

      Identify simple polite statements and courtesies to use in given situations.

      Age 13:

      Recognize that many jobs and occupations require meeting and working with people; recognize that communication skills involve communicating with and understanding others; recognize that communication media include listening, speaking, writing and the use of two-and three-dimensional aids.

      Ages 17, adult (in addition to age 13):

      Identify occupations and careers that require good communication abilities.

      Recognize that service occupations require good communication skills with customers, that teachers must be able to communicate with people at different ages, that social workers need to communicate with people at various socioeconomic levels and that some people such as policemen need to communicate with hostile people.

   b. Listen to and understand spoken and visual instructions, directions and information

      Age 9:

      Listen to and understand instructions to run errands and directions to go from one place to another, listen to and understand school announcements such as what to do in emergencies, understand information given by speakers in films, and listen to and understand instructions to play new games and to do assignments.

      Ages 13, 17 (in addition to age 9).

Listen to and understand instructions of employers about how to do tasks and jobs.

Listen to and understand information given by counselors about registering for courses, preparing for careers and planning school activities.

Understand information provided via television, movies, pictures and other planned visual presentations.

Adult (in addition to ages 13, 17):

Listen to and understand instructions and information describing on-the-job activities.

c. Read and follow written instructions, directions and information

Age 9:

Read and follow printed directions on tests and for assembly of very simple objects; use references, such as dictionary, telephone books and TV program schedules; and use instructions for playing simple games.

Age 13 (in addition to age 9):

Read and follow instructions giving steps for preparing reports and doing projects; scan appropriate written materials by reading only some passages; use references such as encyclopedias, library card catalogues, files and journals; and use telephone book properly, including yellow pages, direct dialing and area code information.

Age 17 (in addition to age 13):

Read and follow directions for laying out dress patterns and installing pieces of equipment; follow instructions for completing and submitting forms; use references such as college catalogues, transportation schedules, zip code handbooks and journals such as *Consumer Reports, Popular Mechanics* and other journals on activities such as sewing and homemaking.

Adult (in addition to age 17):

Read and follow instructions about filming documents; read

and understand legal documents, technical reports, official notices and professional and trade journals.

d. Read and understand pictorial, graphic and symbolic information

Age 9:

Read and understand the meaning of common warning signs; understand ideas presented in progress charts, geographical maps and line graphs.

Age 13 (in addition to age 9):

Read and understand the meaning of street and highway signs; understand common abbreviations; read and understand line, bar and circle graphs.

Ages 17, adult (in addition to age 13):

Read and understand codes and symbols as used in diagrams – such as electrical circuits – weather maps, dress patterns, house and building plans and technical manuals.

e. Give directions, explain, describe and demonstrate clearly

Age 9:

Pronounce words clearly; use language understandable to peers and associates; direct persons to nearby landmarks, using chalkboards, maps or paper to aid in giving directions.

Instruct others in the rules of children's games; use checkerboards to show how to play checkers; show and tell how to lay out hopscotch grids, make paper airplanes, address envelopes and solve puzzles.

Age 13 (in addition to age 9):

Tell and demonstrate how to assemble model airplanes and cars, look up materials in libraries, adjust machinery, make cakes, use simple patterns to make dresses; tell how to transfer on streetcars and buses. Tell how to use the telephone effectively.

Tell how devices work; describe the fundamentals of baseball; use graphs, tables, maps and pictures in written or oral reports;

use needles and yarn to knit; tell and demonstrate how to play a musical instrument.

Age 17 (in addition to age 13):

Use actual equipment to explain processes and principles, tell how to do tasks and jobs and tell how to replace parts.

Explain cause and effect relationships and concepts such as that of supply and demand, use charts to describe organizations, and use diagrams to explain assembly parts.

Adult (in addition to age 17):

Tell how to complete forms such as pay vouchers or insurance claims, assign duties to different persons to get jobs done, give on-the-job training and explain reasons for company policies and malfunctions of equipment.

f. Give organized and informative oral presentations

Age 9:

Present book reports and tell about trips taken and events attended.

Age 13 (in addition to age 9):

Report on group projects, talk on current events and social problems such as water pollution and conservation and give campaign speeches for school offices.

Recognize that physical expressions and emphasis in speaking are means of communication between individuals or between an individual and a group.

Age 17 (in addition to age 13):

Introduce guest speakers, talk to scouts and 4-H groups, speak pro or con at rallies and speak in formal discussions and debates.

Adult (in addition to age 17):

Introduce new products; conduct sales meetings; speak at professional, civic and union meetings; make presentations to school boards, city councils and industrial groups; conduct workshops; demonstrate the basics of giving speeches.

g. Write organized, legible and articulate reports and summaries

Age 9:

Print and write in script, spell age-appropriate words correctly, and write down school assignments.

Age 13 (in addition to age 9):

Write book reports, summarize movies, take notes from reference materials and summarize magazine and newspaper articles.

Age 17 (in addition to age 13):

Write minutes of meetings; describe accidents; summarize important points of speeches; take notes from lectures; outline material; write news articles, compositions and summary reports of opinion surveys; prepare briefs.

Prepare accurate analysis or summaries of programs or reports, and analyze and prepare reports using numerical presentations.

Adult (in addition to age 17):

Prepare technical, progress and trip reports; write business memoranda, personnel reports and logs of work activities.

h. Prepare concise letters, messages, want ads and telegrams

Age 9:

Write thank you notes and letters to classmates and relatives.

Accept and write telephone messages.

Age 13 (in addition to age 9):

Write letters and postcards requesting pamphlets and technical information, and write want ads to sell bicycles and to obtain part-time jobs.

Ages 17, adult (in addition to age 13):

Write telegrams and job application letters, design letterheads, write letters for needed information to companies or suppliers

and write business correspondence and letters to editors and political representatives.

3. Manual/perceptual skills

   a. Identify and use common tools, fasteners and equipment to perform simple household or job tasks

      Age 9:

      Identify and use tools and equipment necessary in running and maintaining the home. The tools and equipment might include hammers, screw-drivers, pliers, saws, scissors, measuring spoons and cups, bottle openers, brooms and dustpans, needles and thread, toasters, telephones, vises, paint brushes, can openers, blenders, vending machines, self-service elevators and various cooking utensils.

      Identify and use common fasteners such as nails, screws and glue to repair household items.

      Age 13 (in addition to age 9):

      Identify and use tools and equipment necessary in the home and in the neighborhood. The tools and equipment might include socket wrenches, electric knives, knife sharpeners, sanders, soldering irons, electric saws, floor polishers, typewriters, portable calculators, refrigerators, ranges and vacuum cleaners.

   b. Read and understand gauges, scales and other common measurement instruments

      Age 9:

      Read and understand rulers, room thermometers, thermostats, timer clocks, bathroom scales, measuring cup scales, heat settings on irons and oven settings; interpret weather vanes.

      Age 13 (in addition to age 9):

      Read and understand speedometers, fuel gauges, home thermostats, pressure gauges, measuring cups, barometers, rain and wind gauges, clinical thermometers and cost and gallons on gasoline pumps.

Ages 17, adult (in addition to age 13):

Read and understand instruments such as those on automobile dashboards; multimeters for volts, ohms, amperes and watts; pressure gauges; and radio and TV tube testers.

Understand how to measure inner and outer dimensions of pieces of pipe with calipers and scale.

c. Construct, fabricate and assemble, using appropriate tools, equipment and materials

Age 9:

Make posters selecting paper strength and weight; build wooden bird houses, puzzles and yard toys; make doll dresses; make watercolor and finger paintings and papier-mache objects; carve paraffin and soap figures; stir and bake premixed cakes; fold and glue bookcovers; set table for dining.

Assemble tinker toys and erector sets; mount rock, coin and stamp collections; assemble jigsaw puzzles.

Age 13 (in addition to age 9):

Make dog houses, bookshelves, bowls and other such objects.

Prepare meals; assemble model airplanes, boats, cars and mobiles; arrange flowers; collate and staple papers; assemble crystal sets.

Sew aprons and pot holders, knit and crochet.

Ages 17, adult (in addition to age 13):

Make dresses and furniture from patterns, make indoor and outdoor objects such as trays and ornaments, build objects from wood and metals and apply finishes to protect the materials from insects and the elements, and make household furnishings from plastics.

Assemble "knock-down" furniture, swing sets, steel shelving and radio kits; install household appliances and traverse rods; build slot cards; assemble toys.

d. Repair and maintain items common in households and occupations

Age 9:

Set thermostats and alarm clocks, replace batteries in flashlights, sew on buttons, mend tears in clothing and pages of books, lubricate bicycles and roller skates, polish shoes, take care of pets and plants, clear tables and wash dishes, make beds, dust furniture and sweep.

Age 13 (in addition to age 9):

Wash and wax cars, change bicycle tires, thread bobbins, replace fuses in electrical circuits, clean stoves and refrigerators, wash windows, set mouse traps, empty or change dust bags in vacuum cleaners, mow lawns and weed.

Ages 17, adult (in addition to age 13):

Change automobile tires, clean and check spark plugs, sharpen knives and tools, replace faucet washers and furnace filters, paint rooms, prune bushes and trees and repair broken furniture and fences.

e. Plan and develop visual presentations

Age 9:

Draw simple map showing directions to familiar landmarks, draw layout for hopscotch and other games, and draw pictures showing general shapes of objects such as vases and blocks of wood.

Age 13 (in addition to age 9):

Sketch three-dimensional pictures of rooms, objects and buildings; draw simple floor plans of furnishings in rooms; sketch layouts for baseball, football and basketball courts.

Ages 17, adult (in addition to age 13):

Draw landscapes with proper perspectives, organizational charts, floor plans for houses, and diagrams showing how belts fit on wheels to operate machinery and how film is threaded through a movie projector.

Draw simple schematics of electrical wiring and plumbing, and

sketch relative positions of vehicles in accidents.

f. Distinguish between adequate and inadequate construction and repairs

Age 9:

Determine when proper repairs have been made to toys, swings, slides and bicycles.

Age 13 (in addition to age 9):

Determine when proper repairs have been made to automobile bodies, furniture, household appliances and sports equipment.

Ages 17, adult (in addition to age 13):

Compare and distinguish between adequate and inadequate construction of furniture, household appliances, utensils, yard tools, automobiles and recreation equipment. Be able to select a product based on preset criteria such as strength, construction and ease of repair.

4. Information-Processing, problem-solving and decision-making skills

a. Know specific procedures and principles used in information processing, problem solving and decision making

Ages 9,13:

Recognize that one must make decisions both at home and at work and that decisions should be based on the best information available, and know that an organized approach to gathering information is often needed for difficult decisions.

Ages 17, adult (in addition to ages 9, 13):

Know that an organized approach to decision making and problem solving includes the following steps:

- Analyze information and define problems.
- Collect and organize data.
- Identify possible solutions or alternatives.
- Make decision or choose alternatives in terms of relevant

criteria.

- Implement plans.
- Evaluate and modify plans based on feedback.

Know that good memory and good educational background are assets in problem solving and decision making.

b. Analyze information and define problems

Age 9:

Distinguish errors in what one observes, reads and hears; note contradictions in different descriptions of the same event; identify errors in arithmetical computations; recognize grossly illogical statements.

Age 13 (in addition to age 9):

Recognize evasiveness and double talk.

Judge one's own performances in schoolwork, home chores, part-time jobs, sports and games and peer-group relationships in terms of how well one would like to be doing.

Age 17 (in addition to age 13):

Recognize unstated assumptions, emotional appeal and illogical arguments; distinguish relationships between the requirements of the contents of school subjects and common occupations; troubleshoot malfunctions in equipment such as typewriters and automobiles; diagnose communication difficulties between two people; recognize cause-and-effect relationships; deduce themes in literary works.

Adult (in addition to age 17):

Compare present job situation to desired goals and identify discrepancies, analyze interpersonal relationships and perceive reasons for interpersonal conflicts.

c. Collect and organize data

Age 9:

Identify sources of various kinds of information; list topics to include in letters; organize information into sensible outlines; schedule a day's play, study and home chores; schedule activities for small groups of children; arrange items on shelves; organize objects by size, material and use.

Age 13:

Organize filing systems with numbers, letters and topical headings.

Schedule programs for clubs and classes.

Recognize when there is insufficient information to solve problems.

Arrange one's own study plans and outline compositions, using two or three degrees of subordination.

Identify and categorize different sources of information, and price articles in a number of stores before purchasing.

Survey the opinions of friends before making decisions.

Age 17 (in addition to age 13):

Collect information relevant to personal characteristics and the world of work; schedule and coordinate tasks of several people on projects; anticipate when supplies will be needed, account for time needed for delivery and order accordingly; combine information from two or more people, as for term papers based on a number of reference books.

Review consumer comparison reports before purchasing goods.

Adult (in addition to age 17):

Organize one's own financial records to complete income tax forms, organize office filing systems, make necessary legal and financial arrangements for starting small businesses, schedule and coordinate activities of several groups of employees and schedule crop plantings.

d. Identify possible solutions and alternatives

Age 9:

Identify alternative routes to walk between school and home, think of several possible ways to spend an evening, and identify alternative plans for after-school activities.

Age 13 (in addition to age 9):

Identify possible solutions based on the information collected; sort facts from assumptions, and use the facts to help develop alternative solutions.

Consider possible outcomes of alternative actions such as joining or not joining peer groups, doing or neglecting assigned schoolwork and obeying or disobeying crossing guards.

Age 17 (in addition to age 13):

Review alternative plans for career education, develop several plans for financial support during education or training and identify part- or full-time positions for which one is qualified.

Adult (in addition to age 17):

Identify present and predicted future economic conditions for the purpose of investing money, changing jobs or going into one's own business.

e. Make decisions or choose alternatives in terms of relevant criteria

Age 9:

Pick books to read that are relevant to topics being studied in school and decide on one of several activities to do during leisure time.

Age 13 (in addition to age 9):

Recognize that individual goals are important in decision making.

Determine the adverse consequences of each possible solution or alternative and choose the course of action that will have the least negative consequences.

Select the most pertinent facts to include in reports, decide the sequence in which to perform tasks, choose activity clubs

to join and decide which of several movies to attend.

Age 17 (in addition to age 13):

Decide either to repair or to replace components of cars, depending on cost or time; either decide to buy or to make dresses, depending on which is less expensive; select several schools to apply to for admission after determining those that offer programs relevant to personal goals such as scholastic standards, financial aid and opportunity for independent study; choose from among several job offers the job best suited to personal characteristics, present needs and future goals.

Adult (in addition to age 17):

Decide which appliances or pieces of furniture to purchase; decide how to apportion income for budgeting; decide which employees deserve promotions or salary increases; decide which persons to hire, transfer or fire; select evening courses with relevance to current personal goals of improving occupational capabilities, broadening cultural knowledge and taking refresher courses.

f. Implement plans

Ages 9, 13:

Implement plan to complete homework assignments, allot time for leisure activities, complete assigned or selected home tasks, budget allowance or income from part-time jobs, and begin and follow through on plans to explore a variety of different careers.

Ages 17, adult (in addition to ages 9, 13):

Implement plans for career preparation, for obtaining part- or full-time employment, for completing planned education in a specified period of time, and for completing plans for a job-related task.

g. Based on feedback, evaluate and modify plans

Age 9:

Evaluate plans for class projects and modify appropriately. For

example, simplify an overly ambitious plan.

Age 13 (in addition to age 9):

Evaluate school progress and spend additional time on homework and less on play if homework problems require more time than anticipated; choose other days to go to movies if help is needed at home.

Age 17 (in addition to age 13):

Evaluate committee progress and reassign tasks of committee members if individual talents are different than originally thought; modify major curriculum goals in school if interests change; seek alternative schools or employment if unable to obtain admission to school first desired; modify techniques in sports by learning from mistakes; devise new topical headings for filing systems if original ones do not classify materials as logically as expected.

Adult (in addition to age 17):

Evaluate budget accounts and adjust for underexpenditures in one fund and unanticipated costs in another fund.

h. Learn and apply procedures and principles that are basic to further learning

Age 9:

Learn rules for playing games; memorize important specifics such as phone numbers, names, addresses and dates; use arithmetic to add up costs of own purchases at stores; when outdoors, look for specimens studied in nature classes and for phenomena studied in science classes.

Age 13 (in addition to age 9):

Apply shortcut mathematical computations to estimate expenses; use knowledge of gardening to plant and raise fruits and vegetables; use language skills in writing papers or in speaking and bring up ideas discussed in one class in the context of another.

Ages 17, adult (in addition to age 13):

Learn and apply principles and skills useful in future training and employment. Such skills might include typing, car maintenance, knowledge of steps in doing laboratory or office work.

Use principles of design to furnish and arrange rooms to improve appearance of homes, use knowledge of automobile operation to perform routine car maintenance, use knowledge of foods to plan and prepare meals, use shorthand to take notes, use typing to prepare reports, use knowledge of electricity to repair lamps and small appliances and use new vocabulary words in conversation.

i. Devise plans, new ideas and better ways of doing things

Age 9:

Think of new games to play; think of arguments to persuade someone to adopt your point of view; make up stories, poems and tunes; plan parties; think of gifts to buy or make; find shortcuts; plan group games and projects; devise schemes for coding messages.

Age 13 (in addition to age 9):

Design new macrame knots, create new recipes, devise strategies for accomplishing social goals and set club purposes and rules.

Age 17 (in addition to age 13):

Outline plans for carrying out complex tasks such as tutoring other students and conducting opinion surveys and elections, design furniture and garments, plan to obtain financial support necessary to implement career-development plans and coordinate schedules for work and extracurricular activities.

Adult (in addition to age 17):

Develop plans for opening own businesses, suggest improvements in company policies in light of social trends, suggest improvements in factory and office procedures, think of new marketable products and services, suggest employee group actions for improving work conditions and modify tools and equipment to adjust to new task demands and to facilitate job performance.

5. Interpersonal skills

a. Know the importance of interpersonal skills

Age 9:

Know the importance of getting along with classmates, know that special privileges can be lost because of failure to cooperate with classmates and learn to solve disagreements with classmates through discussion.

Ages 13, 17, adult (in addition to age 9):

Know that shop and laboratory programs require good interpersonal skills with classmates; know that jobs can be lost if the employee is unable to maintain good working relationships with coworkers, supervisors and the public; understand that getting along with others contributes to success in school and society; understand that a pleasant personality is helpful in obtaining and holding jobs.

Recognize that some careers require more interpersonal skills than others and recognize that many careers require people with strong interpersonal skills for promotion to supervisory positions.

Understand the importance of interpersonal skills when dealing with individuals having different cultural values.

b. Work and interact effectively with peers, teachers and supervisors

Age 9:

Treat others with respect, share and take turns, present one's own beliefs and experiences while determining group activities, help others in need of assistance, seek assistance when needed, refrain from making fun of others, tell the truth, return articles borrowed from others and keep promises.

Age 13 (in addition to age 9):

Attempt to understand viewpoints of others; be sensitive to nonverbal clues such as expressions, gestures and tones; cooperate on group projects and in team sports; talk over differences and compromise when necessary to reach agreements and solutions.

Recognize that knowing more than one language can be an advantage in interpersonal relationships.

Age 17 (in addition to age 13):

Consider time schedules and work demands of others and coordinate own activities accordingly; weigh consequences of one's own acts – such as practical jokes, false accusations and malicious insinuations – to others; provide information needed by others; give assistance to others in such ways as assuming part of their workload, demonstrating new techniques and equipment and suggesting ways in which others can solve problems.

Be receptive to and benefit from suggestions and constructive criticism; comply with reasonable decisions made by teachers, parents and other persons with legitimate authority; interact effectively to reach common goals; defend one's own rights in the face of unreasonable or illegitimate demands.

Understand responsibilities of persons in authority; express alternative viewpoints constructively and work to change undesirable practices.

Understand ethical standards and codes for professions and businesses.

Adult (in addition to age 17):

Maintain ethical standards of conduct in professions and businesses and contribute to the solution of interpersonal problems in employment settings.

Defend employers and employees against unjust accusations and rumors, refrain from making unnecessary criticisms of supervisors in the presence of others and join with others (labor unions, employer associations and committees) to seek common goals.

c. Demonstrate effective leadership

Age 9:

Offer suggestions about how to do things, explain what the rules are and help others improve their performances.

Age 13 (in addition to age 9):

Influence others to give their cooperation without dominating, mediate differences, intercede for those unjustly criticized, volunteer to lead group discussions, set good examples for others, praise work well done, take the initiative in welcoming new persons to groups and recognize when good leadership requires following the lead of others and encouraging group cooperation.

Age 17 (in addition to age 13):

Elicit better efforts from others by good example, encouragement and enthusiasm; schedule, coordinate and evaluate objectively the work performance and work products of others; assume responsibility for errors of groups one leads.

Adult (in addition to age 17):

Criticize tactfully and objectively the work of others for whom one is responsible, offer concrete, constructive suggestions, utilize others' strengths in assigning work, counsel workers to guide development on jobs and in careers, inform management of the talents of subordinates, be receptive to suggestions from those supervised, consult with those supervised before making decisions, recognize when to assert direct or indirect authority and counsel workers about their rights as employees.

6. Employment-Seeking skills

   a. Know where to find information regarding job openings

      Age 9:

      Know commonly used terms and phrases relating to work – such as *employer, employee, union, supply and demand, want ad* and *occupational outlook.*

      Know general factors associated with jobs – such as pay, hours and vacation.

      Age 13 (in addition to age 9):

      Know kinds and locations of jobs available to persons of own

age and sex – for example, delivery, domestic, babysitting and gardening.

Know that there are child labor laws that protect young workers from abuse.

Know ranges of wages currently being paid for part-time jobs and know minimum wage law.

Know what to ask about jobs. For instance, one might inquire about pay, hours and duties.

Know where to look for part-time and summer jobs. For example, see school counselors, visit local businesses, read want ads and place a position-wanted ad.

Know where to seek full- and part-time employment opportunities. For instance, employment agencies, state employment offices, city and county offices, college placement offices, private placement agencies, personnel departments, government agencies, want ads, position-wanted ads or ads in professional journals might be consulted.

Recognize that jobs can often be obtained by visiting employment offices of businesses and public agencies, by inquiring about positions and by leaving an application.

Understand the advantages and disadvantages of each source of employment opportunity. For example, understand that private placement agencies often charge for placement services by either a direct fee or percentage of initial salary.

b. Use appropriate procedures in applying for a job or position

Age 9:

None

Age 13:

Be able to fill out job application forms and write letters of application completely, accurately and neatly.

Act with poise, tact, enthusiasm and courtesy when applying for a part-time position.

Recognize that part-time jobs can be obtained by letting people know of services one can provide. For instance, circulate an announcement of lawn cutting or babysitting services to homes in the neighborhood.

Ages 17, adult (in addition to age 13):

Prepare background resumes that project strengths including responsibilities, leadership, club affiliations, religious activities and civic activities.

Arrange for a job interview by applying for a position and requesting an interview.

Prepare for a job interview by taking along necessary information such as social security number, addresses and phone numbers of references, a resume of previous experiences and education, driver's license and work permit.

Prepare for an interview by becoming knowledgeable about the company's history, performance record, assets, names of officials and other related information.

In interviews, explain to prospective employers the work conditions sought such as hours, pay, and opportunities for career development and advancement.

In interviews, request information about additional conditions of jobs. For example, inquire about fringe benefits, opportunities for advancement and training, union membership, seasonal periods of employment and unemployment benefits.

Dress and groom appropriately for job interviews and be enthusiastic.

Recognize that job descriptions and requirements often represent the desires of the employer, but that experience can often replace educational requirements and that employers often employ people with abilities that do not meet all of the listed requirements. Experience as a technical writer, for instance, might be accepted in lieu of formal education as a technical writer, or accounting experience with a small manufacturing company might be accepted in lieu of job experience when applying for a position as accountant in a dentist's office.

Follow up on job applications and interviews by means of letters and telephone inquiries.

7. Career-Improvement skills

   a. Know that most careers require the continuous attainment of new knowledge and abilities

      Age 9:

      Know that people must continue learning even after they have jobs.

      Age 13 (in addition to age 9):

      Know where to obtain new knowledge and recognize the importance of seeking advice from persons who have demonstrated their ability in sought-after careers.

      Ages 17, adult (in addition to age 13):

      Know that most occupations require the attainment of new knowledge and abilities to maintain a minimum level of performance, that the attainment of new knowledge is necessary to advance or improve career skills and that lack of education or training may limit advancement within a career.

      Know that the higher the level of knowledge required for performance, the greater the amount of knowledge that must be added periodically to maintain career skills.

   b. Know methods of gaining knowledge and abilities necessary to improve existing career and occupational skills

      Age 9:

      None

      Age 13:

      Know that developing hobbies and becoming acquainted with persons who have existing skills can enhance practical skills.

      Know that occupational training is offered by high schools and area vocational schools.

Know that there are adults who are improving their job skills and recognize some of the methods they use.

Age 17:

Know that existing career and occupational skills may be improved by additional study in organized programs offered by adult education programs, high schools, community colleges, senior colleges and universities, private schools and company schools.

Know that experiences on the job, self-study, work-related hobbies, visitations and discussions with other people can all be ways of improving job skills.

Know that many companies subsidize formal training and education.

Adult (in addition to age 17):

Know that participation in conferences, seminars, workshops, in-service training programs and special training programs can increase job skills.

Know that teaching or making presentations using job-related information increases career and occupational skills.

Know that some schools are accredited while others are not; that some educational programs have prerequisites; and that some programs are designed for job improvement, while others are designed for entry level or degree requirements.

Know that the number of ways of improving one's own job skills is extensive and to pursue all of them would be impractical; evaluate in-service opportunities in terms of needed knowledge and abilities; and select method having the greatest potential for improving job skills.

c. Engage in activities that improve skills within a planned career

Ages 9, 13:

Engage in activities that improve part-time job skills. For example, participate in programs for baby sitters or raise livestock for 4-H programs.

Age 17 (in addition to ages 9, 13):

Attend educational events such as science and county fairs, musical programs, auto shows, plays, travel lectures, art exhibits or industrial displays, outside of school.

Pursue education and training such as college preparatory programs, vocational and on-the-job training, night school or correspondence courses.

Obtain part-time and summer work and gain exposure to, or experience in, possible career fields. For example, obtain work as a sales clerk, library page, hospital aide, office clerk, gardener, laborer or food-service employee.

Engage in volunteer work with community agencies and join civic groups.

Pursue hobbies such as cars, electronics, literature, building, music, gardening, sewing, food preparation, typing, drama or collecting.

Participate in extracurricular and community activities. Such activities might include car clubs, organized sports, 4-H clubs, drama groups, foreign language clubs, debate clubs, political rallies, neighborhood youth clubs, school yearbooks and community-action programs.

Study on one's own initiative. For example, read magazines and books not required by school or work, make conscious efforts to increase vocabulary and set up personal reading programs.

Seek out people, such as successful businessmen, academicians, research scientists, musicians, skilled journeymen and union workers, who can help develop one's interests.

Visit places of interest, such as museums, universities, state and local government offices, aquariums, factories, planetariums, businesses, farms, proving grounds, lakes, forests or parks.

Adult (in addition to age 17):

Obtain additional and advanced skills through training. For instance, attend colleges and vocational and technical schools,

and take correspondence courses and adult education classes.

Increase knowledge within career fields. For example, read journals, attend seminars, participate in workshops and conferences and discuss subject matter with coworkers.

Take company-sponsored or other courses required to update knowledge and skills, and participate in retraining and rehabilitation programs.

Join professional and vocational organizations in order to be eligible for training programs, placement services and publications.

Study toward and take any necessary examinations for professional registration and certification.

B. Personal characteristics related to career success

Important aspects of job performance are the manner in which employees accept responsibility, practice initiative, adapt to variable conditions and possess positive attitudes and values toward the world of work. These personal characteristics and related career success foster personal self-fulfillment.

1. Responsibility and initiative

   a. Know that accepting responsibility and practicing initiative can contribute to job success

      Age 9:

      Know that many school assignments and home chores require the acceptance of responsibility to complete the assignment or chore. A special report on home safety, for instance, requires the acceptance of responsibility to check the home for dangerous conditions.

      Ages 13, 17, adult (in addition to age 9):

      Know that many jobs require employees to accept responsibility and encourage initiative. For example, airline flight attendants accept responsibility for the comfort and safety of their passengers and must be able to respond to unexpected situations; a nurse accepts responsibility for seeing that recovery procedures are followed and must be able to act when

unexpected health problems develop; many employees receive awards and bonuses for making suggestions to improve procedures that result in increased efficiency and/or company savings.

Know that accepting responsibility can mean expending more time and energy than had been anticipated.

b. Demonstrate the ability to plan for completion of an assigned or accepted responsibility

Age 9:

Have a plan and procedure for completing homework assignments. Include writing down assignments and due date rather than depending on memory, allowing adequate time to complete assignments before deadlines, having necessary supplies, books and equipment ready when needed, concentrating on completing one activity at a time; avoiding loss of time through procrastination and diversion by less important activities.

Plan activities for friends and groups, and volunteer ideas during group planning sessions.

Age 13 (in addition to age 9):

Record when extracurricular projects such as contests, plays and special programs must be completed.

Record when and where to perform part-time job duties if in variable locations; identify explicit duties, goals and deadlines.

Set reasonable priorities on tasks.

Schedule activities around key events that are fixed or critical.

In planning, consider one's own unique abilities and limitations.

Ages 17, adult (in addition to age 13):

Know deadlines for assignments and projects, and prepare notes of work assigned and of specifications for end products.

Use intermediate goals as check points on progress toward long-range objectives and monitor progress toward goals to detect the need for revision in the goals themselves or in the approach being followed to reach the goals.

Schedule and organize tasks to allow optimum time to complete each one before deadlines, allow time in schedules for unanticipated urgencies and unscheduled time demands and anticipate when workloads or schedules require modified plans or methods; schedule more challenging or creative work to match daily peaks in own energy cycles and more routine or passive work when energies are low.

c. Use initiative when appropriate in performing an assigned or accepted responsibility

Age 9:

Recognize danger in the home and take steps to correct it. For example, move pot handles that extend over counter, remove garden hoses from public sidewalks and pick up toys and household items from floors.

Recognize when to seek assistance, when to ask teachers and family members to listen to and prompt memorizing material and when to ask librarians for help in locating reference materials.

Do school work without being prodded, and ask to make up work that has been missed.

Age 13:

Recognize at what point to take the initiative in sports, home responsibilities and employment when unexpected problems arise, when the activity does not go as planned or when outside factors intervene. For example, when a batter's hitting strengths become apparent in baseball, adjust fielding position; when cutting the grass too close, change cutting height of lawn mower; when an injury occurs while babysitting and parents cannot be reached, call a doctor.

Recognize when to take initiative in part-time employment and daily activities. Ask teachers and employers, for example,

to explain details of required work if necessary, inform employers of any unused abilities and think of ways to contribute to an organization of which one is a member.

Ages 17, adult (in addition to age 13):

Recognize when to take initiative in emergency situations.

Recognize when initiative should not be taken, including where information, knowledge and ability would be inadequate, or agreements and procedures would prevent one from taking the initiative. For instance, a nurse should not prescribe a new medication to correct a problem she believes can be helped by the new medication but should seek the advice of a doctor; an auto mechanic should not perform unauthorized service but should seek owner permission to perform needed service.

d. Demonstrate resourcefulness and efficiency in accomplishing an assigned or accepted responsibility

Age 9:

Identify ways to get home chores done more quickly, by combining several errands.

Age 13 (in addition to age 9):

Identify ways to perform part-time work more quickly and effectively, by eliminating unnecessary steps in tasks.

Identify ways to save time in doing school work or outside group tasks by standardizing methods of doing frequent, similar tasks.

Use reminder systems such as lists of things to do.

Age 17 (in addition to age 13):

Vary pace to maintain efficiency and effectiveness, be alert to new and better ways of doing things and recommend improvements to supervisors, eliminate unnecessary tasks and improvise methods and tools whenever possible.

Spend minimum time in reading by screening out irrelevant material, skimming for main ideas, reading selectively and

practicing rapid reading techniques.

Adult (in addition to age 17):

Economize on paperwork by eliminating work that is no longer useful, combining forms and records and avoiding record keeping for unlikely circumstances.

Avoid losing time through unnecessary involvement in details, fruitless discussions and working on problems to the point of diminishing returns.

Use new processes and available machines to help do one's own work better and faster.

e. Know that good grooming, appropriate dress and health care contribute to job success

Age 9:

Know that success in school is easier when healthy than when feeling ill.

Know that good health will permit regular attendance at school, and that poor health may result in school absence and poor performance.

Know that good grooming can contribute to good health; know that attending to personal hygiene, such as washing hands before meals, brushing teeth and bathing, are part of good grooming.

Know that many factors contribute to good health, such as seeing a doctor when sick and eating proper foods.

Ages 13, 17, adult (in addition to age 9):

Know that drugs and alcohol can cause decreased school and job performance and efficiency.

Know that good health can be maintained by taking precautionary measures, such as eating balanced meals, exercising regularly, having regular checkups and avoiding unnecessary exposure to communicable diseases.

Know steps that will help regain health during and after illness,

including taking prescribed medicine, following a proper diet, resting and avoiding exertion.

Know that standards of health and grooming have been established for some jobs, and that failure to maintain these standards may result in dismissal. For example, local sanitation codes for restaurants often require employees with long hair to wear hair nets and specify standards of cleanliness for employees preparing food.

Know that good health and appropriate dress and grooming can contribute to positive appraisals of performance and assist one in becoming eligible for promotion. Appropriate dress and good grooming, for example, contribute to positive impressions of employers, coworkers and the general public.

f. Accept responsibility for one's own behavior

Ages 9, 13:

Attend school regularly and arrive punctually for scheduled meetings and appointments – for example, classes, buses, lunch, school, out-of-class meetings and home schedules.

Pay attention to assignments and explanations, complete and submit homework and project assignments when due, and check one's own work for thoroughness and accuracy.

Do fair share in any group task. For example, do one's own part of teamwork.

Observe rules and regulations, questioning those believed unfair.

Keep parents and teachers informed of whereabouts when, for example, one leaves for field trips, meetings or games.

Avoid damaging others' property and exercise care for one's own and others' safety.

Ages 17, adult (in addition to ages 9, 13):

Understand and accept consequences of one's own actions.

Be present regularly at school and at work, be punctual for appointments and notify persons concerned when necessarily

absent or detained.

Perform work without wasting time and effort and follow through on commitments.

Check accuracy, completeness and quality of one's own work and be aware of the consequences of errors. For example, know that poor-quality work may cause loss of customers or clients and will waste time and materials. Acknowledge mistakes and rectify errors.

Accept and do not disregard one's own limitations in, for example, skills, knowledge and physical stamina.

Observe rules and regulations and carry out established policies and procedures; question and attempt to change those rules believed unfair.

2. Adaptability to variable conditions

   a. Know factors that can cause changes in working conditions

      Age 9:

      Know factors that cause school and classroom conditions to change, as when rain prevents outdoor activities, sickness keeps many students out of school, heating plant failure makes school cold, or a teacher's illness necessitates having a substitute.

      Age 13 (in addition to age 9):

      Know factors such as weather changes, accidents, fire, change in supervisors, and economic factors that cause conditions in part-time jobs and out-of-school activities to change.

      Ages 17, adult (in addition to age 13):

      Know factors, such as changes in personnel, strikes, shortages of materials, change in need for services or products, unprofitable period for company and unfavorable publicity, that cause working conditions to change.

   b. Adjust to varied work conditions

      Age 9:

Adjust to temporary changes in classroom or school schedules.

Continue to work despite distractions such as noise and visitors.

Tolerate nonideal work surroundings and situations while working toward appropriate corrections.

Age 13 (in addition to age 9):

Concentrate and maintain output in spite of disruptions, malfunctions, noise and competition.

Ages 17, adult (in addition to age 13):

Adjust to varying assignments and to changes in methods and work situations.

Work under occasional pressures of time, overload and stress.

Adjust and evaluate alternatives when setbacks, such as failure or opposition, occur.

3. Attitudes and values

   a. Know the bases of various attitudes towards work

      Age 9:

      Know that many people enjoy their work; know that some do not enjoy their work but work to earn a living.

      Age 13:

      Know that students have different attitudes towards school. For example, know that some students study only for grades, others for knowledge and others not at all.

      Know why students have different attitudes towards school. For example, attitudes are affected by career and occupational goals, past successes, interests in different subjects, abilities, parental attitudes and peer-group pressures.

      Know that student attitudes towards school change as new information and experiences are added, as career goals change

and as interests and abilities begin to parallel school activities; know that positive attitudes towards school can change to negative attitudes when school fails to meet student needs, when interests turn away from school or when students are unable to find success in school.

Ages 17, adult (in addition to age 13):

Know that people have different attitudes towards work. Know that some people, for instance, work only for the money, that some find their work absorbing and rewarding, that some avoid looking for jobs and that some place work second in importance to other more personally meaningful activities.

Know why people have the attitudes that they do towards work. For example, understand that attitudes toward work are affected by many factors, such as education, age, sex, family income, race, religion, nationality, work experience and self-concept. Know that some people have experienced inequalities both in obtaining work and on the job; know that the "work ethic" has been a predominant attitude in America's history; know that the differences of social, ethnic, racial and educational background have made it easy for some people to obtain good jobs and difficult for others to obtain any job; recognize that frustrated ambitions may affect attitudes; know that mass-production techniques have made attainment of personal pride more difficult.

Know that individual attitudes towards work change as new experiences and information are added, as responsibilities increase or decrease and as lifestyles are modified and changed.

b. Identify and analyze one's own attitudes towards work

Ages 9, 13:

Identify one's own attitudes towards school and home chores. For instance, identify preferred school activities and subjects and recognize which chores are preferred and the reasons for the preference.

Ages 17, adult (in addition to ages 9, 13):

Assess one's own attitudes towards school and work including recognition of contributions and abuses of various individuals

to the well-being of other individuals, groups and society; identify own career goals and the manner in which they contribute to societal goals. For example, the goal of becoming a teacher contributes to the education and progress of society, the goal of becoming an environmentalist contributes to the improvement of the quality of life, the goal of becoming a dairy farmer contributes to health and nutrition and the goal of becoming a nurse contributes to the care and well-being of the sick.

c. Recognize and evaluate the personal and societal consequences of one's own attitudes towards work.

Ages 9, 13:

Recognize and evaluate the consequences of attitudes towards school and home chores. Know, for example, that activities disliked are often done poorly, that activities enjoyed are often done well and that ability to perform an activity affects the attitude towards the activity.

Ages 17, adult (in addition to ages 9, 13):

Recognize and evaluate the personal and societal consequences of one's own attitudes – for example, know that negative attitudes interfere with, and positive attitudes contribute to, effective job performance. Know that many employers consider attitude as important as skill, and weigh the consequences of disregard for the world of work versus active planning and preparation for roles in it.

d. Encourage and assist others to develop and use abilities to achieve maximum competence

Age 9:

Encourage and assist siblings in tasks around the home.

Encourage and assist classmates to perform classroom activities.

Ages 13, 17 (in addition to age 9):

Encourage and assist people in developing abilities in both school and work.

Adult (in addition to ages 13, 17):

Support worthwhile programs designed to assist the disadvantaged and unemployed to secure employment and to learn marketable skills.

Work to extend civil rights in the world of work to all persons regardless of race, religion, sex or ethnic origin.

Encourage and help others to secure employment.

e. Recognize the contributions and abuses of various organizations and individuals to the well-being of society

Age 9:

Recognize that the safety patrol helps children cross streets safely, that the custodian operates the machinery that keeps schools warm and clean and that the luncheon manager and staff serve school lunches.

Age 13:

Recognize that many occupations are necessary to provide an ordered and efficient community, and that these occupations should be valued for the service and comfort provided. For example, the collection and disposal of garbage and waste helps prevent disease and assists in maintaining beauty and cleanliness, and bus and rapid transit drivers and employees transport people economically with a minimum expenditure of energy per person.

Ages 17, adult (in addition to age 13):

Recognize that some companies are capable of abusing the well-being of individuals, groups and society. For example, some companies may promote the use of excess energy or throwaway merchandise which contributes to the depletion of natural resources, and some companies sell through fraudulent description of stock or property value. Recognize that such companies may eliminate abuses when they are discovered by the public, and that companies that fail to eliminate well-known abuses are often of short duration; recognize also that abuses may be perpetrated by employees within a company, regardless of company policy – for example, salespeople who put selling goals above the potential buyer's needs and wants.

f. Recognize and appreciate effort, accomplishment and excellence in the completion of an accepted or assigned responsibility

Ages 9, 13, 17, adult

Hold competence, excellence and effort in high regard.

Recognize that friends and associates deserve recognition from their peers for effort and accomplishment.

Recognize excellence attained through activities other than work. For example, recognize excellence in artists, volunteer workers and those engaged in sports.

Recognize the great diversity of abilities and interests which exists among different people; recognize that this diversity has contributed to the progress made by mankind.

g. Value constructive work in terms of meeting societal goals

Ages 9, 13:

Understand the desirability of working and recognize that helping others is important.

Be willing to share family responsibility.

Understand the value of work and other constructive activities as social responsibilities.

Age 17 (in addition to ages 9, 13):

Believe that each person should strive to be as self-sufficient as possible.

Appreciate the economic interdependence of one's own family and other persons in the community, of businesses with other businesses and of one's own community with other communities near and far.

Recognize that circumstances, such as health, often prevent a person from becoming self-supporting; recognize that society sometimes discourages constructive work, as through social security laws, which limit retirement income, and welfare

payment schedules, which decrease with earnings.

Adult (in addition to age 17):

Aspire to be self-supporting and to provide for one's own and one's family's needs.

Understand the integral part one plays in meeting societal needs because of what one produces, the services one renders and the activities in which one engages.

4. Personal fulfillment

   a. Know that people need to experience personal satisfaction and that one's own career can be a source of such satisfaction

      Ages 9, 13:

      Know that students need to experience success in school in order to continue to put forth their best efforts, and that lack of success can be one reason for losing interest in school.

      Recognize the value of one's own accomplishment.

      Know that many different activities can provide personal satisfaction. Know, for example, that completing a school project effectively, being successful at a part-time job and performing home responsibilities properly can give one a source of accomplishment.

      Know that if a job is disliked, performance will decrease and the worker will become frustrated and gain little or no satisfaction.

      Ages 17, adult (in addition to ages 9, 13):

      Be aware of the human need to experience personal satisfaction in one's own accomplishments. For instance, recognize that people's aspirations differ, that workers gain different types of satisfaction from jobs, and that some people are content with jobs that involve routine tasks, while others seek jobs in which expression of ideas, creativity or decision making are sources of satisfaction.

      Know that some work provides personal satisfaction, while some is frustrating and undesirable. For example, know that a

task one performs well is normally enjoyable, while one performed poorly provides a frustration; know that for some a job selected only for the salary can become dull and uninteresting, while for others such a job can provide satisfaction.

b. Establish personal goals that contribute to self-fulfillment

Age 9:

Set goals for personal achievement in school. Identify basic learning skills needed and ways of acquiring these skills, for example.

Age 13 (in addition to age 9):

Establish desired skills and achievements in school and part-time employment. For example, identify needed laboratory skills in home economics or industrial arts, and identify standards of performance for part-time jobs.

Ages 17, adult (in addition to age 13):

Set personal and career goals.

Select activities that complement the goals identified for one's own personal life and career and determine whether these activities contribute to self-fulfillment.

c. Accept the diversity of career goals and lifestyles of others

Ages 9, 13:

Accept the different goals and ambitions of other students, accept that some students want to gain recognition through school while others seek recognition outside of school and recognize that students' interests and goals vary.

Ages 17, adult (in addition to ages 9, 13):

Accept the different goals and lifestyles of others; recognize that some people obtain self-fulfillment through fame and power, others by helping people and others by living a simple life close to nature; recognize that the great variation in lifestyles provides greater opportunities for individual self-fulfillment, since all people are not competing for the same positions and activities; recognize that an individual's lifestyle

represents a personal choice and should be accepted, provided it is not at the expense of the lifestyles of others.

d. Seek personal fulfillment through achievement in school, career and personal life

Age 9:

Try to do one's best in activities in school and at home.

Age 13 (in addition to age 9):

Seek some economic independence through part-time and summer jobs.

Achieve satisfaction from doing well those things that are personally important.

Age 17 (in addition to age 13):

Accept the fact that excellence is not confined to one's own school or occupational activities but can also be attained in a variety of avocational activities, such as art, music, writing, interpersonal relationships and other self-identified interests.

Strive to achieve satisfaction from own accomplishments and do not require constant support from other people to achieve a sense of reward.

Value and enjoy learning as a continuous process throughout life.

Adult (in addition to age 13):

Strive to achieve economic self-sufficiency through continuing education or employment.

APPENDIX

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